



Mandatory Greenhouse Gas Reporting Rule: EPA's Response to Public Comments

Volume No.: 10

**Cost and Economic Impacts of the
Rule**

September 2009

Cost and Economic Impacts of the Rule

**U. S. Environmental Protection Agency
Office of Atmosphere Programs
Climate Change Division
Washington, D.C.**

FOREWORD

This document provides EPA's responses to public comments on EPA's Proposed Mandatory Greenhouse Gas Reporting Rule. EPA published a Notice of Proposed Rulemaking in the Federal Register on April 10, 2009 (74 FR 16448). EPA received comments on this proposed rule via mail, e-mail, facsimile, and at two public hearings held in Washington, DC and Sacramento, California in April 2009. Copies of all comments submitted are available at the EPA Docket Center Public Reading Room. Comments letters and transcripts of the public hearings are also available electronically through <http://www.regulations.gov> by searching Docket ID *EPA-HQ-OAR-2008-0508*.

Due to the size and scope of this rulemaking, EPA prepared this document in multiple volumes, with each volume focusing on a different broad subject area of the rule. This volume of the document provides EPA's responses to significant of the public comments regarding the cost and economic impacts of the rule.

Each volume provides the verbatim text of comments extracted from the original letter or public hearing transcript. For each comment, the name and affiliation of the commenter, the document control number (DCN) assigned to the comment letter, and the number of the comment excerpt is provided. In some cases the same comment excerpt was submitted by two or more commenters either by submittal of a form letter prepared by an organization or by the commenter incorporating by reference the comments in another comment letter. Rather than repeat these comment excerpts for each commenter, EPA has listed the comment excerpt only once and provided a list of all the commenters who submitted the same form letter or otherwise incorporated the comments by reference in table(s) at the end of each volume (as appropriate).

EPA's responses to comments are generally provided immediately following each comment excerpt. However, in instances where several commenters raised similar or related issues, EPA has grouped these comments together and provided a single response after the first comment excerpt in the group and referenced this response in the other comment excerpts. In some cases, EPA provided responses to specific comments or groups of similar comments in the preamble to the final rulemaking. Rather than repeating those responses in this document, EPA has referenced the preamble.

While every effort was made to include significant comments related to the cost and economic impacts of the rule in this volume, some comments inevitably overlap multiple subject areas. For comments that overlapped two or more subject areas, EPA assigned the comment to a single subject category based on an assessment of the principle subject of the comment. For this reason, EPA encourages the public to read the other volumes of this document with subject areas that may be relevant to the cost and economic impacts of the rule.

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COST AND ECONOMIC IMPACTS OF THE PROPOSED RULE

1. METHODOLOGY USED TO ESTIMATE COST IMPACTS

Commenter Name: Michael Carlson

Commenter Affiliation: MEC Environmental Consulting

Document Control Number: EPA-HQ-OAR-2008-0508-0615

Comment Excerpt Number: 39

Comment: It appears that the agency did not include labor costs for determining the applicability of the GHG reporting rule, once finalized, in its presentation of the economic impacts of the proposed rule. The proposed rule is anything but straightforward, including several dozen source categories subject to regulation and different thresholds and other requirements for each source category. An owner or operator must determine what source categories apply to his or her facility and then determine whether any thresholds in each source category are triggered. This is far from a quick and easy exercise. The agency's economic impact assessment is seriously flawed by failing to consider these real and significant costs.

Response: While EPA did not report the costs of determining applicability of the GHG reporting rule, EPA did acknowledge that approximately 30,000 facilities would likely conduct an applicability analysis. EPA has analyzed the costs in assessing the impacts of the final rule, and estimates that approximately 19,900 facilities would have to conduct such analyses at a cost of approximately \$900 each, and subsequently determine that they did not have to report their emissions. (See Table 5.2 and footnote 21 in Section 7.2 of the RIA for the source of these numbers).

2. VERIFICATION METHODOLOGY AND COSTS

Commenter Name: See Table 4

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0635

Comment Excerpt Number: 33

Comment: The analysis of the relative cost of the alternative verification approaches is flawed by the comparison of two options that would provide very different levels of confidence. The EPA verification approach would allot an average of only two hours of staff time to verify emission reports and site visits would be conducted for approximately 0.3% of reporting facilities each year. Based on this assumption, at an average staff cost of \$57/hour the total cost of the EPA verification system was estimated to be only \$1.5 million. This level of verification would provide far less confidence that reported emissions are complete and accurate than the third party verification approach. In contrast, EPA estimated third party verification as costing \$58 million.[footnote: RIA, supra n. 52, at 5-27.] As we have discussed, this approach -- or an EPA approach based upon it -- would provide a detailed review of facility reports. The proper cost comparison for these alternatives is not between two comparable approaches, but between two different intensities of verification, superficial and deep. A more informative cost comparison would be between EPA verification conducted on the same scale, and with the same

frequency of site visits, that third-party verification would involve. Such a comparison would likely show relatively little difference between the two options, both of which would make use of independent contractors for detailed review of emissions reports, require the development of verification protocols and audit procedures, and rely on EPA analysis of broad emissions trends and concerns.

Response: EPA carefully considered the information provided by this commenter and several other commenters on the costs of EPA verification. As a result of this consideration, EPA revised its initial estimates of EPA based verification. Section 5.1.6 of the RIA discusses EPA's estimated cost for verification activities, which are \$7 million per year. In contrast, first year private costs of third party verification are estimated to be \$5000 per entity, totaling \$42 million, and public costs are estimated to be \$17 million. After this reassessment, EPA believes that self-certification with EPA verification is the most cost-effective approach. Our emissions verification approach in this rule is consistent with other EPA emission reporting programs and follows a model similar to the ARP which is a highly successful emissions cap and trade program that consistently produces credible, high-quality data. To enable effective review of a large volume of data reported, facilities will submit data electronically in a standard format through a centralized system. Data needed for emissions verification must be reported. We acknowledge that different programs have different needs and have determined a verification approach that is best suited to this reporting rule. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Kerry Kelly

Commenter Affiliation: Waste Management (WM)

Document Control Number: EPA-HQ-OAR-2008-0508-0376.1

Comment Excerpt Number: 30

Comment: Waste Management has compiled information on the costs of developing voluntary GHG emissions reports for both CCX and CCAR, including the costs of required third-party verification. We have appended to our comments *[TABLE COPIED BELOW]* our estimates of internal staff costs for inventorying under both programs, and we have reported the actual external costs for verification. WM submitted these cost data to the Agency in June of 2008. We have also appended a compilation of costs to date of developing our company-wide GHG emissions inventory, plus an estimate of costs for third-party verification of a company-wide inventory. These data were prepared at the request of the U.S. House of Representatives Committee on Science and submitted to Committee staff in April of 2009. WM investigated the cost of annual third party verification if The Climate Registry's verification requirements were adopted on a federal level. We obtained cost estimates, from a reputable third party verifier familiar with our facilities and emissions for labor expenses associated with verification activities, including on-site verification for an appropriate percentage of sites. To these estimates, we added estimated costs for verifier travel and internal support. The total estimated cost for annual third party verification of WM's GHG reports would be approximately \$500,000.

The effort associated with our voluntary reporting is reflected in the internal WM staff costs and in the external consulting costs of First Environment and SCS Engineers; however, **the verification costs only reflect the costs of verifying direct CO2 emissions from WM California sources, and indirect CO2 emissions associated with electricity use by our California-based operations.**

**Estimated Inventory & Verification Costs for CCAR Reporting
2006 CO2 Emissions**

<i>WM Business Units</i>	<i>Hours</i>	<i>Hourly Rate</i>	<i>Internal Staff Costs</i>	<i>External Cost</i>	<i>Total Cost</i>
Closed Sites	5	\$100.00	\$500.00		\$500.00
Wheelabrator	40	\$100.00	\$4,000.00		\$4,000.00
Recycle America	24	\$100.00	\$2,400.00		\$2,400.00
Upstream Services	5	\$100.00	\$500.00		\$500.00
Nevada MA	50	\$100.00	\$5,000.00		\$5,000.00
San Diego/Orange MA	50	\$100.00	\$5,000.00		\$5,000.00
Los Angeles MA	50	\$100.00	\$5,000.00		\$5,000.00
Sacramento MA	50	\$100.00	\$5,000.00		\$5,000.00
Bay Area MA	50	\$100.00	\$5,000.00		\$5,000.00
Corp Air Program	100	\$100.00	\$10,000.00		\$10,000.00
Total Internal Costs	424				\$42,400.00
I. CONSULTANTS					
First Environment				\$110,000.00	\$110,000.00
SCS Engineers				\$20,000.00	\$20,000.00
II. VERIFIER					
Tetra Tech				\$32,500.00	\$32,500.00
Total External Costs				\$162,500.00	\$162,500.00
Total Inventory Costs					\$204,900.00

Response: Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: William Koetzle

Commenter Affiliation: Chevron Corporation

Document Control Number: EPA-HQ-OAR-2008-0508-0352.1

Comment Excerpt Number: 7

Comment: Third-party verification is more cost-effective than the alternatives. The California Climate Action Registry has determined that verification costs were on the order of pennies per metric ton of emissions. As compared to a market-based emission reduction program where carbon costs are in the range of \$3 to \$40 per metric ton, these costs are relatively small. In addition, verification costs have been shown to decrease after the first year, as both the verifiers and reporters gain experience with the specific methodologies and facilities.

Response: EPA estimates that third party verification would cost an average of \$5000 per facility per year, adding \$42 million in private costs relative the self-certification and EPA verification. See the preamble and comment response document for the full response on the emissions verification approach. While we appreciate the information comparing the costs of third party verification to the costs of a market-based emission reduction program, it was not directly relevant to our decision regarding EPA verification.

Commenter Name: Keith Dennis

Commenter Affiliation: First Environment, Inc

Document Control Number: EPA-HQ-OAR-2008-0508-0212q

Comment Excerpt Number: 2

Comment: On the point of cost, we believe that EPA has overestimated cost of third-party verification and has underestimated that would be borne by EPA to ensure proper verification under this program. Specifically, we believe that the stated cost ranges listed in the supporting review of verification systems and environmental reporting programs memo are high for third-party verification. In the same document, EPA states that fewer facilities would be visited if EPA verifiers verifies the reports, as EPA would not have the budget to visit all or most of the facilities since thousands of facilities will be reporting. We believe that EPA is greatly underestimating the difficulty of ensuring the accuracy of GHG emissions. We believe that the agency costs and type of review anticipated are significantly less than appropriate, given the necessity for accurately reported data relative to the decisions that will be made based on the information and the subsequent implication of its use. EPA also discusses the burden of creating a third-party verification program and suggests that it would bear the cost to develop its own third-party verification requirements and protocols to the GHG rule building on the State programs because the existing verification and accreditation requirements are program-specific. However, program-neutral accreditation systems currently exist that EPA could leverage to avoid these costs, such as the ANSI-administrated GHG validation, verification, accreditation program that accredits bodies under the International Organization for Standardization, ISO 14065. Additionally, EPA would have to create an internal protocol to ensure appropriate quality controls in the absence of third-party verification. For these reasons, we believe EPA's cost benefit analysis of third-party verification is inaccurate and that third-party verification is more economically efficient than presented by EPA.

Response: Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Douglas P. Scott

Commenter Affiliation: The Climate Registry

Document Control Number: EPA-HQ-OAR-2008-0508-0567.2

Comment Excerpt Number: 5

Comment: As EPA points out in the draft MRR, there is a cost to third-party verification. However, there is also a significant cost and level of effort that must be expended for EPA to independently implement a high quality verification program which ensures a reasonable level of assurance and meets widely-accepted standards for accuracy. The Registry encourages EPA to conduct a more comprehensive and detailed analysis of the costs of third-party verification versus EPA's preferred option of self-certification and EPA-performed verification. EPA indicates in the draft MRR that the majority of industry stakeholders are opposed to third-party verification primarily due to the additional cost. EPA indicates that reporters would incur costs to assemble and provide verifiers with detailed supporting data for the emission estimates. However, for EPA to ensure a high quality review of data, regulated parties will need to maintain this data regardless, even if the approach were self-certification with EPA review. Second, regardless of the approach selected (e.g. taxpayer dollars fund EPA to hire staff and develop a verification program or regulated facilities pay third-party verifiers), there is a cost associated with providing quality assurance of emissions data. EPA is assuming that the level of effort required to verify GHG emissions data will be comparable to the level of effort invested in other existing EPA programs which have a narrower scope and less complicated data sets. EPA reports

costs of EPA review and verification of each quarterly report requires an average of 2 hours time and a labor cost of \$54.64 per hour. EPA also estimates that it requires approximately 30 hours to conduct each site visit. The 2-hour average includes time for EPA to conduct site visits and perform detailed audits of approximately 10 facilities per year. Based on EPA's indication that the Acid Rain Program receives emissions reports from 3,537 facilities per year, EPA is conducting a detailed audit of only 0.3 percent of the facilities reporting under its program. This auditing ratio is not nearly sufficient to provide reasonable assurance of reported GHG emissions. Instead of conducting a straight comparison between the anticipated costs of third-party verification, which would provide reasonable assurance on every emissions report submitted to EPA, versus the cost of EPA review, which includes a detailed audit of only 0.3 percent of the facilities reporting under its program, The Registry believes it would be more meaningful for EPA to consider what EPA's costs would be to provide the same level of assurance that would be provided by third-party verification. In order to ensure high quality GHG emissions data, EPA will need to conduct a thorough verification of each emissions report and regularly conduct facility visits, which translates into a need for EPA to significantly increase the resources that it devotes to its verification programs. Also, if EPA intends to conduct a proper annual verification of every emissions report, it is not clear what economies of scale, as proposed by EPA, would result. The Registry strongly encourages EPA to thoroughly evaluate the costs associated with the following components that would need to be addressed in order for the EPA to provide a level of quality assurance necessary to meet established standards: 1. Hiring and training a significant number of staff for an EPA verification program 2. Development of a standard process for conducting verifications 3. Implementation of a verification program, including conducting annual facility visits and reviewing supporting documentation. Based on information obtained from the California Climate Action Registry (CCAR), costs of third-party verification for companies emitting 25,000 metric tons of CO₂ equivalent or higher ranged from \$5,000-\$20,000 per year for an entity-level verification (which may include multiple facilities). Under CCAR's voluntary entity-level reporting program, the cost of third-party verification is generally less than 1 cent per metric ton of CO₂-equivalent emissions, which is minimal compared to the current cost range of \$3 to \$40 to purchase a ton of CO₂ in either a voluntary or compliance market. The actual cost of verification services for a particular facility will depend of a variety of factors such as the complexity of the facility's operations, the types of data monitoring systems, the quality and transparency of the data management system, etc. Costs typically decrease over time due to improvements that a company makes to its data acquisition and management systems based on the issues identified by the verification process.

Response: We acknowledge that different programs have different needs and have determined a verification approach that is best suited to this reporting rule, as described in the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. In response to comments such as this, EPA reexamined its verification analysis and increased its estimated level of effort and programmatic costs, and now estimates the costs at \$7 million. Nevertheless, self-certification and EPA verification remains the lower cost option. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Lane Hallenbeck

Commenter Affiliation: American National Standards Institute (ANSI)

Document Control Number: EPA-HQ-OAR-2008-0508-0411.1

Comment Excerpt Number: 4

Comment: While a requirement for third party verification may result in slightly higher costs for reporters, it would provide more comprehensive data than what EPA has outlined in its plans for verification. Under the proposed reporting rule, EPA will perform the verification component by conducting review of the emission reports as well as periodic audits of the selected reporting facilities. EPA estimates that this will take EPA staff two hours per report per year. This two hour estimate does not account for the complexity in reviewing GHG emissions data and will not result in data that will provide stakeholders or the public with confidence that the data is accurate. Third-party verification would review the emissions report as well as the supporting records, data collection sources and methods, and calculation procedures. In addition, facility level sampling would be carried out to verify the accuracy of sources identified during the review of the emissions report as high risk. The result of this would be the submission of a verified statement that the reported emissions are accurate and free of material misstatement. Furthermore, “self-certification” with EPA verification is likely to be more expensive than the current EPA cost estimate. The cost estimate given in the EPA’s Regulatory Impact Analysis is based on a very low estimate of two hours per emissions report verification. “At a labor rate of \$57 per hour, this yields a total annual cost of approximately \$1.5 million for EPA to review self-reported emissions.” ERG who has been consulting EPA on this role, warned in a memo that “self-certification” with EPA verification could even be more costly for the EPA because the EPA would have to perform a more detailed review of data handling procedures and methodologies for more facilities and would likely have to visit a greater number of sites than currently estimated. ANSI encourages EPA to conduct a more comprehensive and detailed analysis of the cost and benefits of third-party verification versus EPA’s proposed option of “self-certification” with EPA-verification. ANSI urges the EPA to consider the long-term consequences of a federal GHG reporting scheme that does not incorporate third-party verification. At some point in the future, if U.S. entities choose to take part in an emerging international market for CO₂ emissions allowances, it is unlikely that U.S. emissions allowances will be internationally fungible without more comprehensive verification.

Response: Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. As noted in that response, EPA reevaluated the level of effort and cost of its verification program and now estimates that it will cost \$7 million. We believe that this approach will provide data of sufficient quality that it could be used for many purposes, including the ones cited in this comment. Moreover, self-certification and EPA verification remains less costly than third-party verification, which is estimated to cost each affected entity \$5000 per year, and have public costs of \$17 million. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Bernard T. Delaney

Commenter Affiliation: Association of Accredited Verification Bodies (AAVB)

Document Control Number: EPA-HQ-OAR-2008-0508-0531.1

Comment Excerpt Number: 3

Comment: One of the factors in the EPA’s decision regarding verification approach is what has been defined as “strong industry opposition” to third-party verification on the basis of costs. It is our belief that representations and perceptions of third-party verification costs in the contexts of mandatory reporting are overestimated, in some cases greatly. This combined with the previous point regarding the underestimated cost bore by EPA to ensure proper verification under this program undermines the argument against third-party verification on the basis of costs. We urge

EPA to explore the reality of third party verification costs and not be unnecessarily swayed in its decision regarding the verification approach by a cost myth that continues to be perpetuated.

Response: Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. EPA reevaluated the costs of verification in response to comments, and now estimates that EPA verification will cost \$7 million per year. However, it remains less costly to both affected entities and EPA than third-party verification. Please see RIA, table 5-15. Also, see the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: John Bennett

Commenter Affiliation: SGS

Document Control Number: EPA-HQ-OAR-2008-0508-0228q

Comment Excerpt Number: 4

Comment: Please don't be misled by comparisons to other EPA programs where information being reported is not being monetized and traded. This comparison is neither relevant nor appropriate. I might add that cost to verify are directly affected by the regulations reporting certainty. If it's 80/20 or 90/10, those are very cost-effective cut points for the verification. We don't need to be out in the field looking at every fire extinguisher to make this an effective program.

Response: The final rule retains self-certification with EPA verification. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. The comparison of verification costs to a market-based emission reduction program and discussion of reporting certainty do not provide a comparison of 3rd party verification to EPA verification. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Jay Wintergreen

Commenter Affiliation: First Environment

Document Control Number: EPA-HQ-OAR-2008-0508-0228g

Comment Excerpt Number: 2

Comment: Second, EPA has recognized what has been defined as a strong industry opposition to third party verification on the basis of cost. It is our belief that representations and perceptions of third party verification costs in the context of mandatory reporting are overestimated and in some cases greatly. We urge EPA to explore the reality of third party verification costs and not be unnecessarily swayed in its decision regarding the verification approach by a cost method that continues to be perpetuated.

Response: The final rule retains self-certification with EPA verification, and reexamined its cost as a result of comments such as this. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: H.I. Bud Beebe
Commenter Affiliation: Sacramento Municipal Utility District
Document Control Number: EPA-HQ-OAR-2008-0508-0228r
Comment Excerpt Number: 2

Comment: Our corporate experience to date with third party verification is that that third party verification has cost us less than about one cent per ton to have. And while that will change with various reporters, I think that one cent per ton relative to the five, ten, 15 or \$30 a ton that people bandy about for carbon emission values speaks well to the fact that this brings great value at low cost.

Response: After careful consideration of information provided during the comment period, the final rule retains self-certification with EPA verification, which was found to be the most cost-effective approach to verification. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above.. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Sarah B. King
Commenter Affiliation: DuPont Company
Document Control Number: EPA-HQ-OAR-2008-0508-0604.1
Comment Excerpt Number: 10

Comment: DuPont strongly agrees with the Agency's proposal to require self-certification of GHG emissions and other information submitted pursuant to the requirements of this rule. Third-party verification would be costly, burdensome and time consuming. DuPont experience with third-party certification of annual emissions from a single production process at a site has been that it cost \$22,000. This did not include general stationary fuel combustion sources or other process GHG emissions at the site. Taking these points into account, a comprehensive verification of all GHG emissions at the single site would undoubtedly have cost \$50,000 to \$100,000. This is an unnecessary cost given the objectives of this rule.

Response: EPA concurs that self-certification and EPA verification is the most cost-effective approach to verification. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Leslie Sue Ritts
Commenter Affiliation: National Environmental Development Association
Document Control Number: EPA-HQ-OAR-2008-0508-0504.1
Comment Excerpt Number: 21

Comment: EPA has proposed that self-certification of emission inventories instead of third-party verification of the inventories is sufficient to guarantee the accuracy of emission reports. Id. at 16476. NEDA/CAP completely agrees. Under the Clean Air Act, responsible officers certify the truth, accuracy and completeness of information submitted to state and federal agencies, and this is subject to the civil and criminal penalties of the CAA, which currently are approximately \$30,000 a day per violation. In addition, plant personnel and responsible officers at a plant far better understand how processes and plant operation result in emissions of GHG. Bringing in third parties to re-certify emission reports is unnecessary and potentially very costly.

Two of NEDA's members who were required by California law to hire third party consultants to independently review and validate GHGs emitted from their operations spent between \$300,000 and \$400,000 per facility. A portion of these costs were attributable to simply familiarizing professional engineers and their assistants with a plant's processes. We strongly support EPA's determination that independent auditors are not necessary for the collection of GHG emissions information. We would like to add that the associated costs of third party auditors would be extravagant for a number of struggling American industries. It would be unconscionable for EPA to further add to the compliance costs that burden facilities from the proposed GHG emission inventory requirement by creating a third-party auditing industry that would not have as much immediate information available to it as is already available to plant managers, persons who will face personal liability under the current law for reporting incomplete or inaccurate information.

Response: After careful reexamination of the costs of verification, EPA concurs that self-certification and EPA verification is the best approach to verification. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. Our previous experience indicates that the Clean Air Act requirements provide substantial motivation for firms to provide complete and accurate information; we feel we have determined a verification approach that is best suited to this reporting rule. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Bernard T. Delaney

Commenter Affiliation: First Environment, Inc.

Document Control Number: EPA-HQ-OAR-2008-0508-0405.1

Comment Excerpt Number: 1

Comment: This document identifies First Environment's comments on EPA's Mandatory Reporting Rule regarding GHG verification, an issue on which our firm has almost a decade of experience including: We were the first GHG verifier approved by the state of California to conduct GHG verification for the California Climate Action Registry in 2002. More recently, First Environment was among the first firms to be accredited by the American National Standards Institute as a GHG Verification Body under the ISO 14065 international standard. This verifier accreditation is recognized by several established GHG programs including the Chicago Climate Exchange, The Climate Registry, the Climate Action Reserve, and the Voluntary Carbon Standard (VCS). Based on over a decade of experience in GHG consulting, we assert that the approach to verification under the mandatory reporting regulation should be third-party verification as described in "Option 2" of EPA's "Rationale for Verification Requirements" based on the following assertions. 1. Consistency With Similar Programs In the proposed Rule's preamble, EPA states that it selected EPA verification over third-party verification because EPA verification is consistent with other EPA programs. We assert that GHG reporting is significantly different from reporting under the other EPA programs discussed in the rule's supporting material. Differences between this proposed rule and existing EPA rules, such as the Acid Rain Program and Toxic Release Inventory (TRI), include differences in the types and number of emissions sources, the diversity of monitoring approaches and associated data and records, the complexity of emissions quantification methodologies, the sectors covered by the program, and the overall number of reporting entities. Because of these differences, we purport that instead of seeking consistency with other fundamentally different EPA programs, the verification approach should be comparable with other best practice GHG reporting programs. Accredited third-party verification has been important in relation to both emission offsets, such as CDM and JI projects and California Climate Action Registry (CCAR) projects, and organizational GHG emissions

reporting in programs such as the EU ETS, Japan Voluntary ETS (JVETS), UK ETS, TCR, and Western Climate Initiative (WCI).

2. EPA Underestimates Costs of Internal Verification After considering the information contained in the model rule preamble as well as supporting documents, we believe the difficulty of ensuring the accuracy of GHG emissions and the amount of effort that would be needed by EPA to conduct verification of the reported material have been notably underestimated. The model rule covers broad and diverse source categories, some with complex monitoring and quantification methodologies, supported by detailed records and other evidence. Based on our first hand experience as verifiers, the actual effort associated with these EPA reviews will exceed estimated effort, which we believe is based on other existing programs with a more narrow scope and less complicated data sets. We believe that the agency costs and type of review anticipated are significantly less than appropriate given the necessity for accurately reported data relative to the decisions that will be made upon this information and the subsequent implications of its use. The distinct risk associated with this situation is a potential failure to ensure complete and accurate data necessary for policy decisions, as is the objective of the rule.

3. Industry Support for Third-Party Verification One of the factors in the EPA's decision regarding verification approach is what has been defined as "strong industry opposition" to third-party verification on the basis of costs. It is our belief that representations and perceptions of third-party verification costs in the contexts of mandatory reporting are overestimated, in some cases greatly. This, combined with the previous point regarding the underestimated cost borne by EPA to ensure proper verification under this program, undermines the argument against third-party verification on the basis of costs. We urge EPA to explore the reality of third party verification costs and not be unnecessarily swayed in its decision regarding the verification approach by a cost myth that continues to be perpetuated.

4. Availability of Existing Verification Standards that are Not Program Specific EPA discusses the burden of creating a third-party verification program and suggests that it would bear costs to develop its own third-party verification requirements and protocols for the GHG rule (building on the state programs), because the existing verification and accreditation requirements are program-specific. However, program neutral accreditation programs currently exist that EPA could leverage, such as the American National Standards Institute (ANSI) administered GHG Validation/Verification Body accreditation program that accredits bodies under the International Organization for Standardization's ISO 14065. Additionally, EPA would have to create internal protocols to assure appropriate quality control in the absence of third-party verifications. Costs associated with creating a new system can be avoided by adopting the ANSI system making the cost-benefit analysis for third-party verification more favorable than presented by EPA.

5. Consistency of Verified Data EPA suggests that an EPA verification approach would result in a consistent verification approach applied to all submitted data. We argue that the rigorous third-party verification programs that exist today do ensure consistent verification and that the theoretical arguments made in EPA's supporting documents are unfounded. Further, it is widely accepted among the experts and practitioners working in the field that third-party verification is a best practice procedure in GHG reporting and that it improves rather than diminishes overall report data accuracy and consistency. We therefore disagree with this argument against third-party verification.

6. Information Necessary for Future Programs Must Be Accurate if Programs are to Succeed Per the proposed rule's preamble, the data collected under this rule will be used to inform future policy decisions. EPA in finalizing the reporting rule is encouraged to take into consideration the potential that the reporting rule may be used as an essential part of any future USA cap-and-trade scheme (as exemplified by the Waxman Markey Bill). Data from the EPA reporting rule could be used in the baseline setting and the reporting requirements could form the formal framework for monitoring and reporting requirements within a capand- trade scheme. This is specifically important since any cap-and-trade scheme may become law before or very shortly after the EPA reporting rule becomes a requirement. The quality of data upon which any

program, cap-and-trade or otherwise, is based is a critical parameter in the success of the program. It is thus imperative that the information used to inform any future policy is of high quality and integrity to avoid the costly mistakes seen historically when quality data were not available. Phase I2 of the EU ETS, for example, has received noteworthy criticism due to a price drop in April 2006 that was mostly a result of insufficient awareness of challenges in the data set being used to set the baseline. Prior to Phase I commencement, most EU Member State governments performed quick Quality Assurance/Quality Control (QA/QC) checks on self-declared emissions data, which informed their National Allocations Plans (NAPs). Unfortunately over-allocation (embedded within the NAPs) became apparent in the spring of 2006. When market participants learned that the EU ETS was significantly “long”, the carbon price rationally declined to nearly zero for the remainder of the Phase I trading period. Subsequently, in Phase II the baseline setting process was strengthened and the NAPs crosschecked with verified emission data from 2005. As a result, Phase II of the EU ETS has so far not indicated any serious mis- or over- allocation. Third-party verification will help to ensure data credibility and accuracy and will help avoid potentially costly policy miscalculations. First Environment urges the EPA to take into consideration the competencies amongst existing technical verification companies to lead and conduct rigorous verifications of greenhouse gas inventories, and to provide a reasonable level of assurance on the reporting process. This is the approach that is in use in EU ETS and TCR and it has proved effective and suitable. These and other programs rely on the expertise of technical verification companies to assess GHG monitoring reports. For these reasons, we recommend that EPA should include third-party verification in this rule as described in “Option 2” of EPA’s “Rationale for Verification Requirements.”

Response: The final rule retains self-certification with EPA verification. See the preamble for the full response on the emissions verification approach. We acknowledge that different programs have different needs and have determined a verification approach that is best suited to this reporting rule, as described in the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33.

Commenter Name: See Table 4

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0635

Comment Excerpt Number: 29

Comment: A verification system ensuring that emissions reports are complete, accurate and consistent is centrally important to a mandatory GHG reporting system. The Agency has proposed to adopt the approach of self-certification with EPA verification. As described in the preamble, “under this approach, all reporters subject to this rule would certify that the information they submit to EPA is truthful, accurate and complete. EPA would then review the emissions data and supporting data submitted by reporters to verify that the GHG emission reports are complete, accurate, and meet the reporting requirements of this rule.” We agree with EPA that an approach that does not include independent verification of emission reports would not ensure adequate data quality and should not be adopted. Unfortunately, based on our review of the issues, we believe EPA’s approach is not rigorous enough, and instead recommend that EPA either adopt a modified version of the approach described as “self-certification with third-party verification” or substantially strengthen the EPA verification system it proposes. The superficial review of reported emissions contemplated in the EPA verification approach would be inadequate to ensure accurate emission reports. In order to be effective, an EPA verification program would have to be significantly expanded in scope and depth compared to the proposed

approach. Generally, a viable verification program must include adequate provisions to ensure accurate reporting, either through direct verification of emissions reports or by compelling accurate reporting due to the realistic possibility of an audit of reported emissions. Initially, all facilities must receive a thorough review of their data, by a well-trained emissions verifier, and at least one on-site visit in the early years of the reporting program. Ultimately, EPA verification need not include annual site visits for each facility, but it does need to be stringent enough to ensure due diligence by reporting entities. The proposed rule will cover over 13,000 facilities in a wide range of industry sectors and will require reporting from all significant emission sources within these facilities. Many facilities will have a large number of sources of CO₂ and other greenhouse gases, with each source varying by some combination of fuel type, equipment type, and vintage. Accurate and complete accounting across this wide range of sources will require verification that is comprehensive and able to ensure that the reports include accurate emissions estimates from all covered sources. Verification systems that are designed for reporting systems covering a narrower range of gases, sources, and facilities are unlikely to be adequate to address the scope and complexity of emissions sources covered by this rule. Independent verification (either by a third party or EPA personnel) entails a detailed, site-specific review of emissions reports and provides a relatively high level of certainty regarding the quality of emissions reports. The experience with comprehensive GHG emissions reporting to date confirms that independent and detailed verification is necessary to ensure that emissions reports are accurate and complete. As the Climate Registry explained in their public hearing comments on the draft rule, “The Registry’s experience with voluntary reporting is that errors are common in the development of GHG inventories and that third- party verification can cost-effectively ensure accurate and consistent data that is compliant with established protocols and methodologies.” [footnote: “Public Hearing Comments: U.S. EPA Proposed Mandatory GHG Reporting Rule.” The Climate Registry. p.4 (<http://www.theclimateregistry.org>).]. Likewise, according to EPA’s Review of Verification Systems, third party verification would “result in more site visits with actual observation and detailed review of more facilities’ data management systems, on-site records, and calculations.” In contrast, the RIA appears to assume an EPA verification process that is comparable in complexity to the Acid Rain Program’s verification system and that takes an average of two hours of staff time per report to complete. The EPA verification process is described as primarily based on standardized electronic Quality Assurance tools. Site visits would be conducted at a rate of 0.3% of reporting facilities each year. Assuming there are no repeat visits to any site, and no growth in the number of facilities, EPA will visit each facility once every 300 years or so. Remarkably, the RIA concludes that “it is unclear if [third party verification] would increase the accuracy of GHG reporting.” [footnote: RIA, at 5-28]. We believe the evidence is quite clear that the much more complete review provided by third party reporting, or by an EPA approach mirroring its strengths, will provide a significant and necessary increase in the accuracy of GHG reporting relative to the primarily electronic analysis approach proposed by EPA. Data base analysis can provide a useful comparison of reports across facilities and sectors. But by itself, it is completely inadequate to ensure complete and accurate reporting, given the diversity and complexity of emission sources. In order to be viable, an EPA verification program will need to include much more detailed review of emission reports, data sources and calculations, and regular site visits, particularly for large and complex facilities. An EPA verification program, with a level of stringency comparable to that provided by the proposed third party verification approach, would likely make use of third party contractors to EPA. Such a program would be similar to a third party verification program in many ways, including the need for verifier oversight and training, and an audit program.

Response: The final rule retains self-certification with EPA verification. See the preamble for the full response on the emissions verification approach. Please see the response to DCN EPA-

HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. As noted in that response, EPA reevaluated the level of effort and cost of its verification program and now estimates that it will cost \$7 million. We believe that this approach will provide data of sufficient quality that it could be used for many purposes, including the ones cited in this comment. Moreover, self-certification and EPA verification remains less costly than third-party verification, which is estimated to cost each affected entity \$5000 per year, and have public costs of \$17 million. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Bernard T. Delaney

Commenter Affiliation: Association of Accredited Verification Bodies (AAVB)

Document Control Number: EPA-HQ-OAR-2008-0508-0531.1

Comment Excerpt Number: 2

Comment: After considering the information contained in the model rule preamble as well as supporting documents, we believe the difficulty of ensuring the accuracy of GHG emissions and the amount of effort that would be needed by EPA to conduct verification of the reported material has been notably underestimated. The model rule covers broad and diverse source categories, some with complex monitoring and quantification methodologies, supported by detailed records and other evidence. Based on our first hand experience as verifiers, the actual effort associated with these EPA reviews will exceed estimated effort, which we believe is based on other existing programs with a more narrow scope and less complicated data sets. We believe that the agency costs and type of review anticipated are significantly less than appropriate given the necessity for accurately reported data relative to the decisions that will be made upon this information and the subsequent implications of its use. The distinct risk associated with this situation is a potential failure to ensure complete and accurate data necessary for policy decisions as is the objective of the rule.

Response: The final rule retains self-certification with EPA verification. See the preamble for the full response on the emissions verification approach. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. As noted in that response, EPA reevaluated the level of effort and cost of its verification program and now estimates that it will cost \$7 million. We believe that this approach will provide data of sufficient quality that it could be used for many purposes, including the ones cited in this comment. Moreover, self-certification and EPA verification remains less costly than third-party verification, which is estimated to cost each affected entity \$5000 per year, and have public costs of \$17 million. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Denise Sheehan

Commenter Affiliation: The Climate Registry

Document Control Number: EPA-HQ-OAR-2008-0508-0212k

Comment Excerpt Number: 3

Comment: The Registry's primary focus with regard to verification of greenhouse gas data is ensuring that the data collected by EPA is high quality, accurate, and reliable, and that EPA's verification process meets standards established for assuring accuracy. Greenhouse gas emissions are ubiquitous in nature and, therefore, are unlike traditional criteria air pollutants. While EPA is proposing that some greenhouse gas data will be calculated directly at the stack, other methods proposed by EPA for calculating emissions are complex and potentially subject to

reporting errors. Based on The Climate Registry's experience, errors are common in the development of greenhouse gas inventories, and third-party verification can help ensure accurate and consistent data. We encourage EPA to conduct a more comprehensive and detailed analysis of the cost of third-party verification versus EPA's preferred approach. The Registry encourages EPA to consider additional potential options for utilizing third-party verifiers beyond those options discussed in the Draft Proposal. While there is a cost to third-party verification, there is also a significant cost and level of effort for EPA to independently implement a verification program, which ensures a reasonable level of assurance and meets widely accepted standards for accuracy. The Registry also encourages the EPA to consider utilizing international standards for third-party verification and accreditation and partners such as the American National Standards Institute. We understand that EPA plans to utilize ANSI's accreditation services to implement certification requirements for its WaterSense Program, and EPA may wish to consider such a model for greenhouse gas verification as well.

Response: The final rule retains self-certification with EPA verification. See the preamble for the full response on the emissions verification approach. Please see the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33, above. As noted in that response, EPA reevaluated the level of effort and cost of its verification program and now estimates that it will cost \$7 million. We believe that this approach will provide data of sufficient quality that it could be used for many purposes, including the ones cited in this comment. Moreover, self-certification and EPA verification remains less costly than third-party verification, which is estimated to cost each affected entity \$5000 per year, and have public costs of \$17 million. See the preamble and comment response document for the full response on the emissions verification approach.

Commenter Name: Lane Hallenbeck

Commenter Affiliation: ANSI

Document Control Number: EPA-HQ-OAR-2008-0508-0212.1c

Comment Excerpt Number: 2

Comment: Since EPA is utilizing ANSI's accreditation services to implement certification requirements for its WaterSense Program, the agency may wish to consider such a model for the greenhouse gas verification as well. ANSI has a long history of success using international verification and accreditation standards. We encourage EPA to give full consideration to this record of success, as the agency looks to establish credible verification and accreditation programs. Similarly, as part of its cost benefit analysis, ANSI encourages EPA to consider utilizing international standards for third-party verification and accreditation, for example, ISO 14064-3 and ISO 14065 respectively, and partners such as ANSI to encourage consistent verification activities throughout the U.S.

Response: The final rule retains self-certification with EPA verification. See the preamble for the full response on the emissions verification approach. We acknowledge that different programs have different needs and have determined a verification approach that is best suited to this reporting rule, as described in the response to DCN EPA-HQ-OAR-2008-0508-0635, Comment Excerpt 33.

3. COST IMPACTS

Commenter Name: Bill Grygar

Commenter Affiliation: Anadarko Petroleum Corporation

Document Control Number: EPA-HQ-OAR-2008-0508-0459.1

Comment Excerpt Number: 17

Comment: Even if the overall costs are not underestimated, the costs for the oil and gas industry are high relative to those that will be incurred by others. The information made available to the public through the rule docket is inadequate for conducting an independent review of EPA's calculations and many of its assumptions that form the basis for the cost estimates given in the RIA. For example, EPA omitted from the RIA and its appendix the source equipment and component counts that define each of its model facilities. Additionally, the RIA gives just a single cost estimate assumed to represent the average cost to a facility, irrespective of the different types of facilities that fall under the respective Subpart.

Response: Oil and natural gas systems is not included in the final rule as EPA further considers comments and options for this source category. See section III.W (oil and natural gas systems) for a discussion of this source category.

Commenter Name: Bill Grygar

Commenter Affiliation: Anadarko Petroleum Corporation

Document Control Number: EPA-HQ-OAR-2008-0508-0459.1

Comment Excerpt Number: 16

Comment: EPA's cost impact data in Table VIII-1 presents data for each of the subparts separately, but fails to consider the overall burden per facility as facilities are subject to more than one Subpart. In addition, these costs fail to account for additional staff likely to be required to ensure compliance with the extensive requirements.

Response: EPA agrees that the costs facing facilities in some sectors include not only process costs but additional costs associated with other subparts of the rule. While these costs are presented individually in the cost tables, where these conditions apply the costs are summed across applicable subparts and compared to revenues in the economic and small entity impact analyses. In response to comments on this issue, we revised the RIA to more clearly describe the approach taken.

Commenter Name: Alison A. Keane

Commenter Affiliation: National Paint & Coatings Association, Inc. (NPCA/FSCT)

Document Control Number: EPA-HQ-OAR-2008-0508-0593.1

Comment Excerpt Number: 13

Comment: In the preamble, EPA states that the economic impacts of this rule in total annualized cost for the first year are \$168 million. However, EPA states "Professional judgment was used to develop cost estimates and sampling frequency was assumed to not differ by facility size." This is a gross generalization and the impacts on small and medium size enterprises (SMEs) will greatly exceed that of a larger facility that already has the appropriate monitoring equipment and

trained staff to conduct calculations. The regulatory burden will be much greater on SMEs and would result in a facility with insignificant emissions having to report with little to no benefit to a national inventory.

Response: EPA recognizes that the costs presented for facilities in each subpart represent costs that would be incurred by a representative facility, and may not reflect the costs that would be incurred by each individual facility in each industry because, as the commenter notes, facilities with each subpart vary. However, EPA has made every effort to reduce the burden and costs of the rule, especially to small entities, while still ensuring that the program yields high quality data and essential information. The mandatory reporting program will provide comprehensive and accurate data which will inform future climate change policies. Because EPA does not know at this time the specific policies that may be adopted, the data reported through the mandatory reporting system should be of sufficient quality to support a range of approaches. The Agency investigated alternative thresholds and analyzed the marginal costs associated with requiring smaller entities with lower emissions to report. The Agency also recommended a hybrid method for reporting that includes a 25,000 metric ton CO₂e level threshold. In developing the final rule EPA carefully considered the concerns of commenters and made several changes that reduced the burden and cost of the rule. EPA has omitted several subparts from the final rule, while it continues to consider comments and options for those source categories. See the following sections of the preamble for discussion of source categories not included in today's final rule: sections III.I (electronics manufacturing), III.J (ethanol production), III.L (fluorinated GHG production), III.M (food processing), III.T (magnesium production), III.W (oil and natural gas systems), III.DD (SF₆ from electrical equipment), III.FF (underground coal mines), III.HH (industrial landfills are not included in today's rule, but MSW landfills are covered by the rule), III.II (wastewater treatment), and III.KK (suppliers of coal). EPA also changed the length of time that records must be kept, identified mechanisms under which facilities that are no longer emitting GHG can stop reporting, and excluded R&D activities from reporting under the rule. In some subparts, such as Subpart C, requirements for smaller sources are simpler and thus have lower costs; these lower costs have been incorporated into the analysis. For these reasons, EPA has determined that our analysis provides a reasonable characterization of costs for facilities in each subpart. EPA revised its RIA and Cost Appendix in response to comments, to provide additional detail on our cost methodology. As a result, we consider that our documentation adequately describes how the costs were estimated. Complete documentation of the economic analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.

Commenter Name: Dean C. DeLorey

Commenter Affiliation: Beet Sugar Development Foundation (BSDF) Environmental Committee

Document Control Number: EPA-HQ-OAR-2008-0508-0559.1

Comment Excerpt Number: 12

Comment: The economic costs of this program appears to be greatly understated. Costs of reporting will not be passed on to consumers from all reporters, especially commodity industries like sugar, so they will have to be absorbed. Reporters will likely incur additional costs due to increased electricity and fuel rates that are likely to be significant for industry users.

Response: EPA has relied upon the best information available regarding costs, and we have reviewed our assessment on the basis of specific data provided through public comments. This commenter provides no specific alternative data. While our economic impact analysis was

conducted without taking into account the fact that some share of costs may be passed on to customers of each affected sector, facilities' annualized costs were compared to sales for entities in the sector, overall and for small entities. Even when all costs are absorbed by the facility, the costs represent less than 1 percent of sales and thus are not expected to result in significant hardship for affected firms.

Commenter Name: Thomas M. Kiley

Commenter Affiliation: Northeast Gas Association (NGA)

Document Control Number: EPA-HQ-OAR-2008-0508-0558.1

Comment Excerpt Number: 11

Comment: EPA has estimated that the cost for complying with the reporting requirements is \$160 million to the private sector in the first year, and annualized costs in subsequent years to be \$127 million. Estimated compliance costs for natural gas utilities alone, assuming costs of proposed daily metering and annual calibration, would themselves more than likely exceed the EPA's projected private sector costs. The ability of a utility company to recover these costs in a rate case is uncertain, particularly in a time of difficult economic circumstances for most homeowners, businesses and average ratepayers. We would urge EPA to consider the issue of compliance costs very carefully. Like AGA, we would ask whether, for this proposed rule, a specific guidance for handling compliance costs might be provided so that appropriate measures for cost-recovery are taken into account.

Response: EPA carefully considered these comments and reviewed the costs for Natural Gas suppliers. EPA's estimated first year costs per source in subpart NN are only \$4,500; costs are lower in subsequent years. EPA's assessment of economic impacts indicates that costs would be less than \$0.01 per ton of CO₂e emissions, and less than 1% of sales revenues. While EPA makes every effort to minimize the costs and economic impacts of the rule, we are unable to provide source category-specific guidance to promote cost-recovery by regulated utilities. For more information on the costs associated with the rule and the estimated impacts on natural gas suppliers, see Sections 4 and 5 of the Regulatory Impact Analysis.

Commenter Name: See Table 1

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0477.1

Comment Excerpt Number: 9

Comment: The cost of compliance with the proposed rule is likely much higher at a facility-level and in the aggregate than EPA's estimates. At a facility-level, there are costs for the following activities: 1. Procuring, installing, and maintaining measurement equipment; 2. Installing and maintaining information systems that monitor and record emissions; 3. Preparing and submitting emissions data to the EPA; and 4. Production losses associated with making unscheduled shutdowns to install necessary measurement equipment. In its Regulatory Impact Analysis, EPA provides expected costs to covered entities of monitoring GHG emissions for two broad cost categories – labor costs, and capital, operating, and maintenance costs – and only addresses the first three activities listed above. After surveying reports and articles and receiving direct quotes from vendors, the Associations believe that EPA's cost estimates for these activities are significantly less than what actual costs would be based on market data. For example, we believe EPA is significantly understating the cost associated with non-hardware related capital

expenditures, including critical information technology functions necessary for data collection and reporting efforts. We urge EPA to gather cost estimates from a range of continuous emissions monitoring systems (“CEMS”) vendors to more rigorously evaluate potential equipment and labor costs. EPA is non-transparent in its cost analysis because it fails to offer a clear view of the data and sources underlying the analysis of the data. For example, the methodology given for non-EGU (industrial) sources states, “the primary sources of data on individual units were EPA analyses on certain industrial sectors, and a characterization of the U.S. boiler population” (Regulatory Impact Analysis p.4-21). EPA provides no documentation to clarify how this review was conducted, thereby preventing replication of the analysis and calling into question its accuracy. EPA has an obligation to reveal the bases for its cost analysis. In addition, the Associations recommend that EPA acknowledge and account for the costs associated with suspending operations in order to upgrade equipment and implement processes for monitoring GHG emissions. These costs could potentially be much larger than the labor and capital costs estimated by EPA in the rule and, as such, must be taken into account in EPA’s rulemaking. For those entities that will be forced to upgrade existing CEMS, delays could be significant depending on the nature of the production processes to be monitored. The Associations further recommend that EPA consider permitting covered entities a flexible installation period to allow upgrading activities to take place during normally scheduled production outages. The length of this “upgrade window” would vary by sector and reduce overall compliance costs. Prior to the end of this transitional period, entities in each sector would be allowed to report emissions using methods they deem appropriate. The cost of a marginal drop in emissions data quality from self-reporting would be minor relative to the costs of abrupt process suspensions to meet a pre-determined program implementation schedule. At an aggregate level, the Associations believe the cost estimate for complying with the policy is overly-simplistic. In the Regulatory Impact Analysis, EPA contends that its recommended option for monitoring – referred to as the “hybrid” approach – requires that entities that previously installed CEMS to comply with existing regulations, such as ARP or NBP, upgrade those systems to include GHG monitoring capabilities. Those entities that did not previously have CEMS installed can calculate GHG emissions using “default parameters,” or indirect calculations based upon high heat values, CO₂ emission factors, fuel consumption, etc. The estimated cost for complying with the “hybrid” approach is \$168.4 million in the first year and \$134.0 million in subsequent years in 2006 dollars. In order to estimate these costs, EPA applies a simple ratio of Tier 4, Tier 2, and Tier 1 costs to the estimated cost of the recommended “hybrid” method. Applying simple ratios to estimate cost changes across a multitude of sectors and production process is highly questionable. Rather, EPA should conduct a more robust cost analysis of these alternative reporting methods. Accurate estimates of compliance costs for different reporting requirements will also be an important input into choice of a regulatory approach in any mandatory GHG regulatory system that EPA may subsequently adopt. For example, if an upstream system based on accounting records for fuel purchases has significantly lower compliance costs than a downstream system based on CEMS, that fact needs to be taken into account in the regulatory rulemaking process.

Response: In response to this comment and others, the final rule added provisions in 40 CFR 98.3 to allow use of best available monitoring methods for part of calendar year 2010. This will allow more time to enable the affected facilities to make system or equipment upgrades during regularly scheduled downtime, thus reducing costs. Further, EPA gathered additional data on costs and re-examined the costs in each sector, in addition to considering ways in which to reduce the burden of the rule. Because of changes in the rule and re-estimated costs, costs per affected entity declined in 22 of the remaining 29 source subparts. See Section 4 and the Cost Appendix of the Regulatory Impact Analysis for more detail. In reference to the comment

requesting further detail on the CEMS cost analysis, please see the appendix to the RIA in Docket EPA-HQ-OAR-2008-0508, responses to comments volume 16 document, and preamble section III.C.

Commenter Name: Lloyd Stone

Commenter Affiliation: Westlake Chemical Corporation

Document Control Number: EPA-HQ-OAR-2008-0508-0442.1

Comment Excerpt Number: 5

Comment: The costs imposed by Subpart C are not reflected in Subpart X and vice versa. This greatly under-represents the true cost to those affected by both source categories. Additionally, EPA uses a 2006 cost basis that relies on 2002 cost estimates.

Response: EPA agrees that the costs facing facilities in some sectors include not only process costs but additional costs associated with other subparts of the rule. While these costs are presented individually in Section 4 of the RIA, where these conditions apply the costs are summed across applicable subparts and compared to revenues in the economic and small entity impact analyses. EPA will ensure that this process is clearly described in Section 5 of the RIA. EPA employed data from the 2002 Economic Census to characterize typical facilities and firms in affected sectors. These data provide the best, most detailed characterization of sales for entities of different sizes by detailed NAICS categories. EPA adjusted all dollar values to 2006 dollars using the Consumers Price Index for all goods for appropriate years.

Commenter Name: Randy Armstrong

Commenter Affiliation: Shell Oil Company

Document Control Number: EPA-HQ-OAR-2008-0508-0651.1

Comment Excerpt Number: 2

Comment: In section IV.E of the preamble, EPA justifies the January 1, 2010 effective date in part by explaining the proposed monitoring devices are already required by other air quality programs with which many of the facilities subject to the reporting rule are already complying. This assumption is portrayed in section VIII of the preamble that discusses the economic impacts of the proposed rule. Table VIII.4 on page 74 FR 16599 shows the average estimated cost of the proposed rule to oil and gas extraction facilities, chemical manufacturing facilities, and petroleum refineries is estimated to be \$23,000/entity, \$12,000/entity, and \$24,000/entity, respectively. Shell believes EPA has underestimated the economic impact of the proposal as does API. One Shell facility estimates 30 new monitoring systems must be installed to meet the proposed requirements. These new systems are estimated to cost a total of \$500,000 to \$1,000,000 to install and \$50,000 to \$75,000 per year to operate. As discussed in API's comment, API is in the process of conducting a survey of its members to collect detailed information on anticipated costs of compliance and regulatory impact and anticipates providing the results of the survey to EPA in the July 2009 time frame.

Response: EPA recognized that based on the language used in subpart Y of the proposed rule, some refineries interpreted that monitoring and reporting was required for each individual combustion source; we have clarified the language in subpart Y in the final rule that the use of common pipe monitoring is allowed. Please see Subpart Y of the rule, III.Y of the preamble, and

Volume 37 of the Response to Comments Document for details on the final rule provisions. Under the final rule, we anticipate that most refineries will only need to monitor a few centralized locations in their fuel gas system. Additionally, we have provided for weekly sampling (rather than continuous or daily sampling) and include default factors for “still gas” for stationary combustion sources. Given the provisions in the final rule, and re-estimated costs, EPA estimates that cost per entity in Subpart Y will be approximately \$41,000 per year.

Commenter Name: Peter Boag

Commenter Affiliation: Canadian Petroleum Products Institute (CPPI)

Document Control Number: EPA-HQ-OAR-2008-0508-0428.1

Comment Excerpt Number: 5

Comment: There appears to be consensus that direct costs will be borne – CPPI believes WCI and others have understated the burden. This reporting proposal adds material cost to operations – capital investments will be required that in our experience, are unnecessary in order to provide regulators with first class information. The requirement to install flow meters and High Heat Value analyzers and the resulting calibration programs run in capital costs alone in the range of \$25,000 to \$70,000 per device, not per facility. Quality Assurance accordance with the AB code of practice (similar codes in place for ON too, and maybe other jurisdictions) for one CEMS for SO_x and NO_x is approximately \$100,000 per year. For one facility with multiple stacks, quality assurance of multiple CEMS could be in the order of millions. Such an investment needs to be weighed against the gain in accuracy from inventory calculations. NPRA and API have well documented the capital cost implications and CPPI supports their conclusions. We believe existing reporting requirements in Alberta and with the federal government are more than adequate to obtain accurate information. CPPI will be working with the Canadian federal and provincial governments to more fully quantify these costs and why they are unreasonable.

Response: In response to this comment and other similar comments, EPA revised subparts C and Y of the rule to clarify the rule’s provisions and reduce its burden to the extent possible. Please see Subparts C and Y of the final rule, Sections III.C and III.Y of the preamble, and Volumes 16 and 37 of the Response to Comments Document for details on revisions to the rule and cost estimates. Further, in developing the final rule, EPA made several revisions that may reduce the burden on reporting, including reducing the length of time records must be retained from 5 years to 3 years, excluding R&D activities, and providing mechanisms for facilities to cease reporting if they no longer exceed the 25,000 Mt CO₂e threshold. As a result of these revisions, we estimate that the costs for Subpart C entities will be approximately \$8600 per year, which is \$1000 lower than costs under the proposed rule. Reexamination of the costs for refineries, including costs for calibrating equipment, resulted in an increase in the per-entity cost estimates. Nevertheless, the per-entity first-year cost for refineries is only estimated to be \$41,000 per year.

4. ECONOMIC IMPACTS

Commenter Name: James S. Loving

Commenter Affiliation: National Cooperative Refinery Association (NCRA)

Document Control Number: EPA-HQ-OAR-2008-0508-0609.1

Comment Excerpt Number: 2

Comment: Establish a Small Business Regulatory Enforcement Act (SBREFA) process to investigate the impact of the regulation on NCRA and other SBR's, (2) explore flexible options and (3) determine how to mitigate unfair or excessive impacts that could threaten the viability of NCRA and other SBR's. NCRA believes that compliance costs will be much higher for our refinery than EPA estimates. Compliance costs will be significant and should be evaluated in the context of the overall costs of compliance with multiple regulations. For example, compliance with the Renewable Fuel Standard requirements alone cost NCRA \$2.7 million in 2008 and could cost as much as \$10.0 million in 2009.

Response: The Agency tried to reduce the impact of this rule on small entities, including seeking input from a wide range of private- and public-sector stakeholders. When developing the proposed rule, the Agency took special steps to ensure that the burdens imposed on small entities were minimal. The Agency conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting. The Agency investigated alternative thresholds and analyzed the marginal costs associated with requiring smaller entities with lower emissions to report. The Agency also recommended a hybrid method for reporting, which provides flexibility to entities and helps minimize reporting costs. Further, in developing the final rule, EPA made several revisions that may reduce the burden on small businesses, including reducing the length of time records must be retained from 5 years to 3 years, excluding R&D activities, and providing mechanisms for facilities to cease reporting if they no longer exceed the 25,000 Mt CO₂e threshold. Under this threshold, EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. For this reason, EPA did not establish a SBREFA panel process for the rulemaking. The summary of the factual basis for the certification is provided in the preamble for the rule. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

5. IMPACTS FOR SMALL ENTITIES

Commenter Name: Shawne C. McGibbon

Commenter Affiliation: Small Business Administration (SBA)

Document Control Number: EPA-HQ-OAR-2008-0508-0979.1

Comment Excerpt Number: 6

Comment: If EPA determines that the GHG reporting threshold should be lowered below the current 25,000 metric ton CO₂e level, the potential impact on small entities would increase, perhaps dramatically. Smaller facilities would be required to install and operate CEMS or other GHG direct monitoring devices, driving up the cost of the GHG reporting rule. To determine whether this action would significantly impact a substantial number of small entities, EPA would need to convene a Small Business Advocacy Review (SBAR) Panel on GHG reporting under section 609(b) of the Regulatory Flexibility Act (RFA).[footnote: 5 U.S.C. §609(B).] EPA could benefit from receiving the views of small entities, and their on-the-ground experience, through the Panel process. The Panel process would also afford EPA the opportunity to consider alternative ways to achieve its regulatory objective without injuring small entities.

Response: See the response to comment EPA-HQ-OAR-2008-0508-0420, excerpt 6 for a discussion of the approach to the small business impacts analysis. See preamble section II.E and

comment response volume 2 document for response to comments on thresholds. See subpart C of the final rule for a discussion of changes made to requirements for stationary combustion sources. It should be noted that there is no requirement for the installations of new CEMS. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

Commenter Name: Shawne C. McGibbon

Commenter Affiliation: Small Business Administration (SBA)

Document Control Number: EPA-HQ-OAR-2008-0508-0979.1

Comment Excerpt Number: 2

Comment: Small entities are far less likely to have CEMS or other direct monitoring systems in place, and the cost of installing and operating such monitors would be a significant economic burden on these small entities. Moreover, small entities are likely to have greater difficulty in complying with facility-specific GHG emission calculations, because of the costs of testing and the complexity of the calculations. A small business or small community is more likely to have to hire an outside consultant or other professional to ensure that they are properly following EPA's reporting rules.

Response: Section III.C of the preamble and comment response volume 16 document provides detail and responses to comments on CEMS for general stationary fuel combustion sources. See subpart C of the final rule for a discussion of changes made to requirements for stationary combustion sources. It should be noted that there is no requirement for the installations of new CEMS. To allow commercial businesses, institutions, and small industrial facilities to easily determine applicability without performing GHG emissions calculations, EPA has provided an exclusion for facilities with a combined rated heat input of less than 30 million Btu. In addition, EPA will provide additional applicability determination guidance with simple cutoffs depending on the type of fuel combusted. Therefore, applicability determination for commercial and institutional buildings is not complex or burdensome. For more information on applicability determination, see the preamble and the comment response volume on subpart A and outreach materials posted on the Web site.

Commenter Name: Robert R. Hirst

Commenter Affiliation: International Bottled Water Association (IBWA)

Document Control Number: EPA-HQ-OAR-2008-0508-1143.1

Comment Excerpt Number: 2

Comment: The burden of monitoring, recordkeeping, and reporting on small-to-medium-sized facilities unaccustomed to detailed federal environmental compliance outweighs the minor benefits achieved by collecting detailed GHG emissions data from such an insignificant source category. In recent testimony to Congress, Administrator Jackson has reiterated that EPA's GHG policies are not designed to adversely impact smaller businesses. Limiting the scope of the proposed rule as we have suggested is a step towards avoiding those adverse impacts. Taken together, including non-Title V sources in a source category that contributes less than 0.5% to nationwide GHG emissions appears to be contrary to EPA's stated goal of "[b]alanc[ing] the rule coverage to maximize the amount of emissions reported while excluding small emitters," and may be contrary to Congress' directive to require reporting of GHG emissions "above appropriate thresholds." [Footnote: Consolidated Appropriations Act, 2008, Pub. L. 110-161, 121

Stat. 1844, 2128 (2008). AFFI also notes that EPA has not estimated the incremental GHG emissions to be reported at different threshold levels, making it very difficult to determine whether the 25,000 MTCO₂e/yr threshold for the food processing source category is reasonable. Compare Table M-1 with Table N-1, 74 Fed. Reg. 16,507–508.]

Response: Please see the response to comment EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above, for EPA’s approach to reducing burdens on small businesses. Also, please note that the food processing sector is not included in the final rule as EPA further considers comments and options for this source category. See section III.M (food processing) for a discussion of this source category.

Commenter Name: Dean C. DeLorey

Commenter Affiliation: Beet Sugar Development Foundation (BSDF) Environmental Committee

Document Control Number: EPA-HQ-OAR-2008-0508-0559.1

Comment Excerpt Number: 20

Comment: We encourage the US EPA to further consider impacts to small to medium companies and American farmers in promulgating this GHG inventory rule. Although all US beet sugar processing facilities anticipate being required to participate the GHG inventory, the additional resources required to comply with reporting rules will significantly impact our typically nearly a century old facilities that have to compete in a commodity industry.

Response: Please see the response to comment EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above, for EPA’s approach to reducing burdens on small businesses. Also, please note that the food processing sector is not included in the final rule as EPA further considers comments and options for this source category. See section III.M (food processing) for a discussion of this source category.

Commenter Name: Mark R. Vickery

Commenter Affiliation: Texas Commission on Environmental Quality (TCEQ)

Document Control Number: EPA-HQ-OAR-2008-0508-0666.2

Comment Excerpt Number: 8

Comment: The food processing, stationary combustion, manure management, oil and natural gas, and landfills with recommended increases in reporting thresholds are more likely to contain smaller business or local governments. Raising the reporting threshold will reduce the burden on these smaller sources with little impact to the overall inventory. Some of these categories have a large number of reporting sources with small amounts of emissions in the corresponding source category. The Executive Director of the TCEQ believes that EPA should also provide blanket exemptions for small businesses to assure they will not be negatively impacted by a burdensome reporting requirement that would comparatively yield a small amount of reported emissions. The first year reporting burden of \$218 million as stated in the RIA is biased low by not taking into consideration that the sources must make an initial emissions estimate to determine if the source meets rule applicability. The EPA is considering providing capacity guidelines (e.g., tons of clinker per day) to assist entities in determining rule applicability. These data are used in the European Union and the EPA is encouraged to use reporting capacity guidelines for sources to lessen the burden on smaller sources. Additionally, the average first year burden on industry is

not \$0.04 per mtCO₂e, as quoted by the EPA, but is higher. The electricity generating sources already report and should be removed from this estimate. After removing this source's estimate of 2,262 million tons (out of the 3,870 MtCO₂e regulated in the proposed rule), the average cost for the remaining sources is estimated to be nearly \$0.09 per ton.

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. The summary of the factual basis for the certification is provided in Section VIII of the preamble for the rule. In response to this and other similar comments, EPA revised some provisions of the rule to reduce the cost burden, especially for small entities. EPA further re-estimated the costs of complying with the rule's provisions. EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. EPA's cost estimate for the first year of the program totals \$132 million, including \$17.2 million in coverage determination costs for facilities that determine they do not have to report. Estimated coverage determination costs for reporters are included in their sector-specific costs of complying with the rule. (Note that these estimated costs are for the 10,152 facilities estimated to be required to report under the 25,000 CO₂e threshold. This is a smaller number than were estimated to be covered at proposal, because several subparts of the rule are not being finalized at this time. First year cost per ton is estimated to be \$0.03. Cost per facility is estimated to range from less than \$5000 per facility to \$63,000 per facility, depending on the subpart; overall, first year costs average \$9600 per reporting facility.) Subsequent year costs are estimated to be \$89.1 million, \$0.02 per ton, or an average of \$7100 per reporting facility. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.

Commenter Name: Susan Eckerly

Commenter Affiliation: National Federation of Independent Business (NFIB) and NFIB Small Business Legal Center

Document Control Number: EPA-HQ-OAR-2008-0508-0587.1

Comment Excerpt Number: 6

Comment: When it comes to regulatory costs, small business gets stuck with the bill. A study performed by economist Mark Crain for the Small Business Administration estimated that regulations cost Americans \$1.1 trillion annually. This cost falls disproportionately on small businesses, with the smallest firms (20 or fewer employees) bearing the greatest burden - - \$7,647 per employee, per year. [Footnote: Mandatory Reporting of Greenhouse Gases, 74 Fed Reg. 16497 (proposed Apr. 10, 2009). Importantly, the study also showed that small businesses face a 45 percent greater regulatory burden than their larger counterparts.

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. The summary of the factual basis for the certification is provided in Section VIII of the preamble for the rule. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

Commenter Name: Sally V. Allen

Commenter Affiliation: Gary-Williams Energy Corporation

Document Control Number: EPA-HQ-OAR-2008-0508-0982.1

Comment Excerpt Number: 3

Comment: While not all the signatories of this letter meet the EPA/SBA small business definition for refiners, the majority do. Those who qualify request that EPA establish a Small Business Regulatory Enforcement and Fairness Act (SBREFA) process to investigate the impacts that the proposed regulations are likely to have on small refiners and how best to mitigate any unfair impacts as well as to develop flexibility options in any proposed data gathering methodologies and reporting systems.

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2. In response to this comment, EPA estimated worst case costs for small refineries to be approximately \$80,000 per year. Under normal refinery operating conditions, these costs are less than one percent of total establishment revenue, and less than one percent of small refinery firm's revenues.

Commenter Name: Matt Smorch

Commenter Affiliation: Countrymark Cooperative, LLP

Document Control Number: EPA-HQ-OAR-2008-0508-1081.1

Comment Excerpt Number: 2

Comment: Countrymark also requests that EPA establish a Small Business Regulatory Enforcement and Fairness Act (SBREFA) process to investigate and determine the impact that the proposed regulations are likely to have on small business refiners and to determine how best to mitigate the impact on them.

Response: Please see the response to Comment DCN EPA-HQ-OAR-2008-0508-0982.1, Comment Excerpt 3, above.

Commenter Name: Susan Eckerly

Commenter Affiliation: National Federation of Independent Business (NFIB) and NFIB Small Business Legal Center

Document Control Number: EPA-HQ-OAR-2008-0508-0587.1

Comment Excerpt Number: 2

Comment: The preamble to the proposed rule is over 800 pages long and the proposed rule itself covers nearly 600 pages. Few, if any, small business owners have either the time or scientific and mathematical expertise necessary to plod through over 1,000 pages of complex technical documents to determine if their business is even subject to the rule. Beyond its length, the rule is unnecessarily confusing with complex mathematical formulas provided to determine CO₂ emissions. These mathematical calculations will be foreign to small firms. Even with EPA's promised education and outreach, small firms will undoubtedly be forced to retain outside consultants to monitor, calculate and report GHGs or be subject to substantial penalties. In summary, the rule's size and complexity coupled with its severe civil and criminal penalty structure dictate that small firms retain outside experts to ensure compliance. Small businesses that consult with an outside professional to determine whether they are subject to, and in compliance with, the proposed rule, will incur significant expenses. NFIB does not believe the costs associated with determining whether an entity is subject to the rule were included in EPA's

assessment of the impact of the proposed rule on small entities. Because these costs were not included, NFIB believes that EPA significantly underestimated the economic impact of the proposed rule when it conducted its economic and regulatory flexibility analysis. As a result, we request that EPA calculate the costs small firms are likely to incur in determining whether or not they have reporting obligations under the proposed rule and revise its regulatory flexibility analysis to reflect those costs.

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. EPA has re-examined the costs of applicability determination and has estimated that the total cost of the determination activity would be approximately \$870 per facility. These costs would be for a one-time fuel sampling and are based on the costs for monthly fuel sampling outlined in the Final Regulatory Impact Analysis, section 4.3. Under normal operating conditions, these costs are likely to be well-below one percent of total facility revenue. See Comment Response Document Volumes 7 and 12, for additional information on applicability and general rule development, respectively.

Commenter Name: Thomas W. Easterly

Commenter Affiliation: Indiana Department of Environmental Management (IDEM)

Document Control Number: EPA-HQ-OAR-2008-0508-0525.1

Comment Excerpt Number: 31

Comment: If U.S. EPA proceeds with this proposed reporting rule, any actions that could impact small businesses should be minimized during these harsh economic times

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. The summary of the factual basis for the certification is provided in Section VIII of the preamble for the rule. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

Commenter Name: Susan J. Miller

Commenter Affiliation: The Brick Industry Association

Document Control Number: EPA-HQ-OAR-2008-0508-0478.1

Comment Excerpt Number: 6

Comment: The BIA requests that EPA: Strongly consider the impact on the large number of small businesses that will be caught in this rulemaking, simply by being a relatively energy-intensive process. Any burden on these industries should be balanced by the potential for these industries to fully participate in any “cap and trade” or related program. This should include the ability for smaller industries, such as ours, to be provided with the same proportional emission credits (i.e., at no charge) that larger industries are provided.

Response Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. The summary of the factual basis for the certification is

provided in Section VIII of the preamble for the rule. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

Commenter Name: Angus E. Crane

Commenter Affiliation: North American Insulation Manufacturers Association (NAIMA)

Document Control Number: EPA-HQ-OAR-2008-0508-0537.1

Comment Excerpt Number: 2

Comment: Given the current economic crisis, the proposed rule should impose no more than the bare minimum requirements. EPA should ensure that the proposed rule obtains sufficiently useful emissions data while imposing the absolute minimum burden on American industry and the economy, particularly because of the current economic crisis. As EPA notes, it can supplement the requirements of the proposed rule with subsequent information collection efforts should the need arise. (Id. at 16,456). Unduly burdensome and costly regulation is never prudent, but it is particularly harmful in the current economic crisis, especially for industries like insulation manufacturing which are largely dependent on the long-suffering housing and construction industries. NAIMA member companies range in size from multinational corporations to single-facility small businesses, and all have been severely impacted by the current economic crisis. Specifically, some NAIMA members are small businesses, which the Small Business Administration defines for mineral wool SIC Code (3296) as companies with fewer than 750 employees. (13 CFR § 121.601). The proposed rule has the potential to impose substantial burdens on small businesses, which face the uncertainty of current economic conditions in addition to regulatory costs and burdens already in place. Therefore, NAIMA strongly urges that flexibility be added throughout the proposed rule to alleviate requirements that may hasten the demise of small businesses such as certain NAIMA members. Such flexibility not only honors the intent of the Small Business Regulatory Enforcement Fairness Act of 1996 (“SBREFA”), Pub. L. No. 104-121, 110 Stat. 847 (1996), but also is consistent with EPA’s goal to “exclude[e] small emitters.”

Response: Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above. EPA has considered the economic impact of the final rule on small entities and concluded that this action will not have a significant economic impact on a substantial number of small entities. The summary of the factual basis for the certification is provided in Section VIII of the preamble for the rule. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5.2.

6. BENEFITS FOR SOCIETY

Commenter Name: Michael Carlson

Commenter Affiliation: MEC Environmental Consulting

Document Control Number: EPA-HQ-OAR-2008-0508-0615

Comment Excerpt Number: 40

Comment: 38. The fact that the benefits of the proposed GHG reporting system are “very difficult to quantify and monetize” (16602) suggests that the benefits are illusory. The Preamble indicates that the greatest benefit of the agency’s mandatory GHG reporting scheme would be the government’s ability to develop future GHG policy. Based on the scientific data mentioned

above, there is no environmental reason for a GHG policy. The belief that human activity can affect climate is merely hubris.

Response: Please see Section I of the Preamble to the final rule for the science motivating the development of this rule. Section VIII of the Preamble summarizes the anticipated benefits of the proposed rule, which include providing the government with sound data on which to base future policies and providing industry and the public independently verified information documenting firms' environmental performance. While EPA has not quantified the benefits of the mandatory reporting rule, EPA has determined that the information gathered through this rule is essential to developing effective policy options for GHGs and that they outweigh the estimated costs.

7. GENERAL COMMENTS ON COSTS AND ECONOMIC IMPACTS

Commenter Name: Jo Ann Emerson

Commenter Affiliation: U.S. House of Representatives

Document Control Number: EPA-HQ-OAR-2008-0508-0341

Comment Excerpt Number: 2

Comment: Southern Missouri's economy is energy intensive and the proposed rule will adversely impact this region and others disproportionately. Southern Missouri, like many rural areas of the nation, relies on a local economy based in manufacturing and agriculture. These jobs are extremely important to the quality of life for the Americans I represent, and at the same time these jobs are very sensitive to the bottom line of their companies. Any increase in the cost of doing business in Southern Missouri is a reason for the parent companies to move these jobs to foreign markets where the cost of labor is much lower and environmental standards are relaxed, if not nonexistent. In my opinion, the U.S. has lost a golden opportunity to reform emissions standards by working with the manufacturing sector of our economy. Instead, this heavy-handed approach merely shifts the emissions of employers in America to cheaper, less-responsible employers overseas. In this way, the proposed rule outsources American jobs while doing little, if anything, to regulate emissions of greenhouse gases. At the same time, this new rule heaps concerns at the feet of rural electricity providers. Energy producers will be hit especially hard by any mandated measurement of greenhouse gas emissions, as well as the adverse effects of any subsequent action to fine, penalize, punish or tax an American business for the production of energy. These punitive costs would most certainly be passed along to the customers of energy producers, and they will ultimately strike at the heart of a rural economy that relies on electricity as a major input of production. Agriculture and manufacturing certainly lead the list of sectors which would feel the greatest adverse impact of this rule and any enforcement actions which may follow.

Response: EPA has made every effort to reduce the burden and costs of the rule, especially to small entities, while still ensuring that the program yields high quality data and essential information. The mandatory reporting program will provide comprehensive and accurate data which will inform future climate change policies. Because EPA does not know at this time the specific policies that may be adopted, the data reported through the mandatory reporting system should be of sufficient quality to support a range of approaches. When developing the proposed rule, the Agency took special steps to ensure that the burdens imposed on business, especially small entities, were minimized. The Agency conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as

recordkeeping and reporting. The Agency investigated alternative thresholds and analyzed the marginal costs associated with requiring smaller entities with lower emissions to report. The Agency also recommended a hybrid method for reporting that includes a 25,000 metric ton CO₂e level threshold. In developing the final rule EPA carefully considered the concerns of commenters and made several changes that reduced the burden and cost of the rule. EPA has omitted several subparts from the final rule, while it continues to consider comments and options for those source categories. See the following sections of the preamble for discussion of source categories not included in today's final rule: sections III.I (electronics manufacturing), III.J (ethanol production), III.L (fluorinated GHG production), III.M (food processing), III.T (magnesium production), III.W (oil and natural gas systems), III.DD (SF₆ from electrical equipment), III.FF (underground coal mines), III.HH (industrial landfills are not included in today's rule, but MSW landfills are covered by the rule), III.II (wastewater treatment), and III.KK (suppliers of coal). EPA also changed the length of time that records must be kept, identified mechanisms under which facilities that are no longer emitting GHG can stop reporting, and excluded R&D activities from reporting under the rule. Complete documentation of the economic analysis can be found in the Final Regulatory Impact Analysis (RIA), Section 5. See also Response to Comments Document volume 7 for additional information about the rule development process.

Commenter Name: Anonymous public comment

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0199

Comment Excerpt Number: 2

Comment: Your proposed regulations are simply a tax on productive citizens of this country.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above.

Commenter Name: Michael Bradley

Commenter Affiliation: The Clean Energy Group (CEG)

Document Control Number: EPA-HQ-OAR-2008-0508-0479.1

Comment Excerpt Number: 10

Comment: Several areas of the proposed rule will likely result in increased compliance costs for the utility sector (specifically the transmission and distribution of electricity and natural gas). These costs are likely to include both capital and administrative expenses in the first year with additional administrative costs in subsequent years. Currently, utilities do not have adequate cost recovery mechanisms in place to account for these increased costs. As such, the Clean Energy Group recommends that EPA provide guidance in this area to facilitate cost recovery at the state and federal levels where appropriate.

Response: EPA carefully considered these comments and reviewed the costs for Natural Gas suppliers and electric utilities. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above. Providing guidance on cost recovery for public utilities affected by this rule is not within EPA's expertise. For more information on the costs associated with the rule and the estimated impacts on natural gas suppliers, see Sections 4 and 5 and the Cost Appendix of the Regulatory Impact Analysis.

Commenter Name: Joseph J. Croce
Commenter Affiliation: Virginia Manufacturers Association (VMA)
Document Control Number: EPA-HQ-OAR-2008-0508-0526.1
Comment Excerpt Number: 9

Comment: To assure that an effective registry is established that does not impose additional costs on the struggling manufacturing sector, the VMA recommends that EPA assist industry in measuring and tracking GHG emissions. In order to achieve maximum participation in reporting, the EPA should incentivize cooperation. At the least, the EPA should shoulder more of the program cost. The EPA has estimated proposal costs ranging from \$109 to \$434 million; however, the federal government's share of the cost remains \$8 million. The VMA believes that climate change policies must not do harm to the U.S. economy. In order to avoid additional compliance cost burdens on the private sector, the federal government should devote more financial resources to the federal registry.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above. EPA incorporated as much flexibility as possible to reduce the compliance on society. Further, EPA re-evaluated its costs of administering the program, and increased them from \$8 million to \$17 million. While EPA does not have the authority to subsidize compliance activities or otherwise incentivize cooperation, EPA has chosen self-certification with EPA verification, which reduces burdens on reporters to pay for third party verifiers. For additional information about the costs and economic impacts of the final rule, see EPA's Regulatory Impact Analysis, Sections 4 and 5 and the Cost Appendix.

Commenter Name: Susan J. Miller
Commenter Affiliation: The Brick Industry Association
Document Control Number: EPA-HQ-OAR-2008-0508-0478.1
Comment Excerpt Number: 7

Comment: The BIA requests that EPA: EPA should consider the combined impact of all regulatory actions undertaken by the Agency on a single industry. While we understand that it is difficult to evaluate the burden from regulatory activities in other agencies (e.g., Department of Labor), the EPA should consider the impact of multiple EPA-developed regulations on a single industry. As an example, this is not the only costly environmental program being considered for our industry. Our industry is also undergoing a revised rulemaking process for air toxic emissions from our industry, in response to a recent vacatur of the national emission standard for hazardous air pollutants (NESHAP, a.k.a. "MACT standards"). Our industry, largely comprised of small businesses, spent millions of dollars to comply with that rule, which has now been vacated. EPA is currently estimating that hundreds of millions of dollars in capital costs may be required to comply with the future MACT for this category. In addition, our industry is also subject to a newly revised new source performance standard (NSPS) [for Nonmetallic Mineral Mining operations (40 CFR Part 60, Subpart OOO)] and new requirements for changes to numerous national ambient air quality standards (NAAQS). Any economic evaluation of the impact of these various rules is incomplete without an assessment of the impacts on the viability of an industry as a result of the other pending requirements.

Response: EPA recognizes that all regulated industries face a variety of Federal regulations, including environmental regulations. In preparing the Mandatory GHG Reporting Rule Regulatory Impact Analysis, EPA followed standard analysis practices and used *EPA's Guidelines for Preparing Economic Analyses*. The Regulatory Impact Analysis is designed to evaluate the direct effect of the Mandatory Reporting Rule rather than assess the effects of other rulemaking processes. The rulemakings cited in the comment, not this rulemaking, would be the appropriate venue for submitting comments.

Commenter Name: Henry Derwent

Commenter Affiliation: International Emissions Trading Association (IETA)

Document Control Number: EPA-HQ-OAR-2008-0508-0512.1

Comment Excerpt Number: 7

Comment: It is imperative that monitoring and reporting solutions for those sectors and organizations not covered by CEMS do not result in costs that are seen as unpalatable by the applicable sectors.

Response: Section III.C of the preamble and comment response volume 16 document provides detail and responses to comments on CEMS for general stationary fuel combustion sources. See subpart C of the final rule for a discussion of changes made to requirements for stationary combustion sources. It should be noted that there is no requirement for the installations of new CEMS. To allow commercial businesses, institutions, and small industrial facilities to easily determine applicability without performing GHG emissions calculations, EPA has provided an exclusion for facilities with a combined rated heat input of less than 30 million Btu.

Commenter Name: Rasma I. Zvaners

Commenter Affiliation: American Bakers Association (ABA)

Document Control Number: EPA-HQ-OAR-2008-0508-0497.1

Comment Excerpt Number: 6

Comment: EPA should proceed carefully when designing a greenhouse gas program, including the Mandatory Reporting of Greenhouse Gases proposal, so as to not overly burden the food processing industry, and thereby impose price burdens on the Nation's food supply at a time when the economy is already negatively impacting businesses' livelihood. For example, if a bakery with emissions near the 25,000 tons per year were a "covered facility" under a "cap-and-trade" proposal, that business would have to pay \$500,000 per year in carbon fees for emissions allowances, even if allowances were priced at only \$20/ton. This is a significant impact to a small or medium size business.

Response: The food processing industry is not included in the final rule as EPA further considers comments and options for this source category. See section III.M (food processing) of the Preamble to the rule for a discussion of this source category. However, if the source has stationary combustion operations that emit more than 25,000 MtCO₂e, it would be covered by Subpart C (see section III.C of the preamble). Consideration of the costs and economic impacts of hypothetical future environmental policies is beyond the scope of this rulemaking.

Commenter Name: Joseph J. Croce
Commenter Affiliation: Virginia Manufacturers Association (VMA)
Document Control Number: EPA-HQ-OAR-2008-0508-0526.1
Comment Excerpt Number: 4

Comment: The VMA believes that environmental programs should achieve a balance between economic development and environmental protection. Inherent in a goal of economic development is the ability of businesses to remain competitive in a globalized economy. Given the current costs of regulatory compliance it is imperative that new regulation be subjected to the scrutiny of a cost-benefit analysis. Coupled with exemplary science, this cost-benefit analysis should be utilized to create the parameters and guidelines for GHG emissions reporting. Any monitoring equipment required by a new federal registry should be scrutinized to ensure that there is a benefit that exceeds the costs of the equipment.

Response EPA concurs with the commenter's point that the rule must provide environmental benefits while minimizing the cost and economic impact to society. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of EPA's efforts to minimize the economic impact of the rule. Please see the Preamble to the proposed rule, and Section 5 of the Regulatory Impact Analysis EPA has examined the benefits of the rule, which entail providing critical, high quality information on GHG emissions. Please see Section 6 of the RIA for a discussion of the benefits assessment.

Commenter Name: See Table 2
Commenter Affiliation:
Document Control Number: EPA-HQ-OAR-2008-0508-0440.1
Comment Excerpt Number: 23

Comment: Economic Impact The first year of data collection is likely the most expensive. For the 25,000 mtpy threshold, EPA estimates the cost burden to be \$109 million. This estimate most likely significantly underestimates the true cost, not only because of the reasons outlined herein, but because EPA has made a number of assumptions about wages and other expenses that appear to be extremely conservative.

Response: EPA discussed and presented information for the costs and economic impacts of the proposed rule, including the estimated costs and benefits of the proposed rule, and the estimated economic impacts of the proposed rule on affected entities, including estimated impacts on small entities. Complete detail of the economic impacts of the proposed rule can be found in the text of the regulatory impact analysis (RIA). Section 4, together with the Cost Appendix to the RIA, provide detailed discussions of the cost estimation methods. EPA's cost estimation methods reflect accepted engineering practices and publicly available cost and price data. For example, EPA used wage rates and overhead factors from the Department of Labor's Bureau of Labor Statistics.¹ In developing the final rule, EPA re-evaluated its cost estimates and made adjustments where appropriate. The current first-year cost of the rule is estimated to be \$132 million, affecting an estimated 10,152 reporting facilities.

¹ Bureau of Labor Statistics. <http://www.bls.gov/bls/wages.htm>

Commenter Name: Thomas W. Easterly

Commenter Affiliation: Indiana Department of Environmental Management (IDEM)

Document Control Number: EPA-HQ-OAR-2008-0508-0525.1

Comment Excerpt Number: 2

Comment: Coal is the most prevalent fuel used for power generation in the U.S. today, providing between 50-54% of America's electricity and about 95 percent of Indiana's electricity. As such, coal-fired electric generating plants are the cornerstone of our nation's central power system. Reasonably priced and reliable electrical power is critically important to Indiana's businesses, communities, consumers and industries. U.S. EPA should consider the cumulative costs and timing of all federal policies affecting utilities currently under development (e.g. Best Available Retrofit Technology for Regional Haze, Clean Air Interstate Replacement Rule, Clean Air Mercury Rule Replacement Program for mercury control, Reasonably Available Control Technology, etc.) when considering the cost effectiveness of this proposed rule

Response: EPA followed standard analysis practices and used *EPA's Guidelines for Preparing Economic Analyses*. A Regulatory Impact Analysis is designed to evaluate the direct effect of a specific rulemaking rather than assess the effects of other rulemaking processes. The rulemakings cited in the comment, not this rulemaking, would be the appropriate venue for submitting comments. As stated elsewhere, EPA believes the rule is a cost-effective way to provide the critical high quality GHG data required to inform evaluation of policy options under the CAA. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule.

Commenter Name: Bryan Vickers

Commenter Affiliation: The Glass Packaging Institute (GPI)

Document Control Number: EPA-HQ-OAR-2008-0508-0670.1

Comment Excerpt Number: 1

Comment: It is necessary to explain the nature of GPI's overall concern for GHG reduction strategies. In today's global economy, we are seeing an increase in foreign imports of glass containers, presenting a very real threat to our facilities in the U.S. This is occurring primarily due to regulatory and other government-driven cost differences between domestic and foreign manufacture of glass containers. Glass container imports are very likely to increase in the U.S. if the cost of complying with new U.S. GHG regulations imposes a higher burden on the American glass producers than their foreign competitors. As a defined, energy intensive industry, domestic glass container producers operate with very small profit margins in order to be competitive with glass plants located outside of the U.S.. The Proposed GHG Reporting Rules and the draft Cap and Trade provisions currently being discussed in Congress will likely increase manufacturing costs for domestic manufacturers, but not necessarily on foreign manufacturers that sell in the U.S. If U.S. manufacturers attempted to pass these costs on to their customers, it is likely that many customers will resource their business to foreign manufacturers to save money. This resourcing will lead to 'leakage' of GHG emissions to foreign glass manufacturing facilities, which are often located in countries with little or no emissions regulations or oversight. This is a major issue for the glass container manufacturing industry and other energy intensive industries and is likely to lead to worldwide, unregulated increases in greenhouse gas emission levels. The Proposed Mandatory GHG Reporting Rule covers both-fuel based CO₂ emissions and process-based CO₂ emissions. Regarding fuel-based GHG or CO₂ emissions, control strategies that

incorporate efficiency, fuel economy and alternatives to traditional fuel sources can be implemented to reduce emissions. Process emissions, however, cannot be reduced utilizing such strategies since they are inherent to the manufacture of glass from raw materials charged into the furnace. Limestone and soda ash are melted with sand to form glass, and CO₂ is released from these carbonate materials. Thus, process GHG emissions cannot be eliminated because there is no other method available to make glass. Reductions in glass container process emissions can only be achieved by producing less glass. This likely will result in a 'Race to the Bottom' scenario as described in many academia circles where industry shuts down and relocates to jurisdictions where similar GHG rules do not exist. Thus, the manufacture of glass will simply be shifted to locations outside the U.S. with the resultant leakage of GHG emissions and the loss of valuable, well paying jobs. Climate change attributable to GHG emissions is not a local problem, but rather a global issue. Any leakage would defeat the purpose of an organized GHG reduction effort by transferring the GHG generation to a different location resulting in no reductions. Further, GHG emissions would be increased due to longer transportation pathways to the end user. Additionally, those jurisdictions would likely have less stringent and/or fewer regulatory standards resulting in further GHG emissions increases and generally diminished air quality.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of EPA's efforts to develop a rule that provides critical high-quality data on GHG emissions while minimizing the economic impact to regulated sectors.

Commenter Name: Anonymous

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0272

Comment Excerpt Number: 4

Comment: Regulating CO₂ to control climate will also have large negative impacts on our economy. To propose heavily burdensome regulation and the resultant economic impact, particularly during this state of the national and global economy, is the height of irresponsible government. The potential disastrous impacts from this proposed rule, which would regulate only .01 percent of CO₂ in the atmosphere is absurd and dangerous to our well being. It will not preserve our welfare but do the opposite. Even under an assumption of CO₂ having a harmful role in the atmosphere, this rule would do nothing whatsoever to prevent emissions from other countries or that occur naturally, so there would be no benefit at huge cost. There is great certainty the negative effects on the economy are unnecessary and damaging, and not protective as this bill is claimed to be. Dimissing science from the rule making process violates the foundation of how EPA rulemaking should be conducted.

Response: Please see the discussion of climate science in Section I the Preamble to the Rule. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to develop a rule that provides critical data while minimizing economic impacts.

Commenter Name: D. A. Huff

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0281.1

Comment Excerpt Number: 4

Comment: The percentage of GHGs caused by human activity is currently estimated to be about 5 percent of the total annual release of GHGs to the Earth's atmosphere. So, even a 90 percent reduction in GHG emissions attributed to human activities will do little to reduce the total amount of GHGs that are currently being released to the Earth's atmosphere. What independent cost-benefit analysis and validated scientific research exists that supports the conclusion that focusing costly mandatory reporting requirements on this small fraction of GHGs caused by humans will result in a measurable benefit to the global ecosystem?

Response: Please see Section I of the Preamble to the Rule for a discussion of climate science underlying the Rule. Please see the response to DCN EPA-HQ-OAR-2008-0508-0615, Comment Excerpt 40, above, for a discussion of the benefits of the rule. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. More information on the benefits and costs of the rule are found in Section VIII of the Preamble to the Rule and in Sections 5 and 6 of the Regulatory Impact Analysis.

Commenter Name: D. A. Huff

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0281.1

Comment Excerpt Number: 3

Comment: During the Ice Age in the late Ordovician period, it has been estimated that CO₂ levels from 4000 to 5000 ppm existed (10 to 13 times higher than current levels). Since computer models provide the primary technical rationale for requiring reporting and control of GHGs, can this past ice age phenomenon be explained using the existing computer models that predict higher atmospheric temperatures when and if CO₂ levels rise above the current historically low levels? If these models are incapable of explaining the climate conditions that existed during previous periods on Earth, what is the logical basis for relying on them to predict future events with respect climate change? Have independent due diligence and peer reviews been done for all computer modeling data (e.g., proxy data used to represent historical temperatures) that validates the technical validity and representativeness of this data with respect to its use in predictive climate modeling? Imposing costly mandatory reporting measures before thorough reviews of this data have been completed would be irresponsible and betray the public trust that the American people should expect from publicly funded agencies.

Response: Please see the discussion of climate science and the endangerment ruling in Section I of the Preamble to the rule. No climate modeling was done to support this rulemaking, which was done under the authority of the CAA in response to Congressional request.

Commenter Name: D. A. Huff

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0281.1

Comment Excerpt Number: 2

Comment: What independent cost-benefit analysis has been done that concludes that the cost of the proposed mandatory reporting provides demonstrable and measurable net benefits to society

that exceed the costs associated with imposing such a mandatory GHG reporting system on American businesses that will ultimately be borne by the American consumer?

Response: Please see the response to Comment DCN EPA-HQ-OAR-2008-0508-0281.1, Comment Excerpt 4, above.

Commenter Name: Jason Muckley

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0270.1

Comment Excerpt Number: 1

Comment: Reading through the Regulatory Impact Analysis posted on your website, it seems as if electricity generation will be affected most financially by the proposed GHG rule to be enacted in the near future. I understand that it is possible that this industry may be affected most because of its sheer size, however, I believe it often to be the practice of electricity providers, which have a virtual monopoly on a given geographical area, to pass on increasing costs of energy due to federal regulations to consumers directly. Figuring, it is costing us x amount of dollars to now produce this regulation, so we will just increase the cost of energy per unit to match the costs we are facing. Now, in such a time of economic hardship and upheaval, why is it so necessary to indirectly tax American citizens so heavily by imposing this new GHG regulation? Also, what kind of regulations will you enact on these electricity generators to prevent them from doing this to the American people? I feel like this proposition is a very reckless regulation that will affect every American in the US. Please carefully re-consider those you will affect when enacting such far-reaching regulations.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to develop a rule that provides critical data while minimizing economic impacts. Further, please see Section III.D of the Preamble to the Rule and Response to Comments Document Volume 17 for more information about development of the rule for the Electricity Generation subpart.

Commenter Name: C. Harman

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0172

Comment Excerpt Number: 2

Comment: What is the economic impact on industry to add another layer of reporting to the huge volumes of reporting that goes on currently? Currently new industrial development is required by multiple agencies, to undertake costly environmental impact statements. Any and every environmental group who believes a business is polluting is hounded and sued. The science behind the effect of Greenhouse Gases on Man Made Global Warming is being refuted daily. The economy cannot withstand more regulation particularly in the current recession.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to develop a rule that provides critical data while minimizing economic impacts. Please see Section I of the Preamble to the Rule for a discussion of the climate science and endangerment ruling that underlie the rule.

Commenter Name: D. McNitt

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0193

Comment Excerpt Number: 3

Comment: The plant where I worked has been shut down, mainly because of the \$6 million capital expenditure and \$1 million per year operating cost of an ammonia injection system required by the EPA. Now I and 200 other people are basically going on welfare because there are just no jobs available. So instead of collecting taxes you will have negative cash flow supporting all the people you have put out of work. If everyone wants such high standards then there should be protective tariffs against countries which burn our coal, which we no longer get to burn, and make jobs for their people. Make the playing field level!! Makes me wonder if the EPA is an American organization. The economy cannot withstand more regulation particularly in the current recession.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to develop a rule that provides critical data while minimizing economic impacts.

Commenter Name: D. McNitt

Commenter Affiliation: None

Document Control Number: EPA-HQ-OAR-2008-0508-0193

Comment Excerpt Number: 1

Comment: What is the economic impact on industry to add another layer of reporting to the huge volumes of reporting that goes on currently?

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to minimize economic impacts.

Commenter Name: Thomas W. Easterly

Commenter Affiliation: Indiana Department of Environmental Management (IDEM)

Document Control Number: EPA-HQ-OAR-2008-0508-0525.1

Comment Excerpt Number: 4

Comment: The proposed reporting rule will result in additional costs to American industry. U.S. EPA estimates the cost to the private sector to be \$160 million for the first year. In subsequent years the annualized costs for the private sector would be \$127 million. Costs will vary depending on the type of industry affected. There are many unanswered questions concerning the major causes of climate change, including the role of anthropogenic GHG emissions, as compared to naturally occurring emissions and effects. U.S. EPA should clearly establish the link between anthropogenic GHG emissions and climate change and clarify that the emissions reported under this rule are the important contributors to any climate change before promulgating a rule that will pose significant costs to American industry which would ultimately be passed down to consumers. Balancing cost with benefit is essential. The proposed reporting rule, as

written, is too costly considering the current economic situation and the lack of measurable benefits achieved.

Response: Please see the response to Comment DCN EPA-HQ-OAR-2008-0508-0281.1, Comment Excerpt 4, above.

Commenter Name: Mark R. Vickery

Commenter Affiliation: Texas Commission on Environmental Quality (TCEQ)

Document Control Number: EPA-HQ-OAR-2008-0508-0666.2

Comment Excerpt Number: 11

Comment: When determining the sources and thresholds required for inventory reporting, the Executive Director of the TCEQ cautions the EPA to consider unintended adverse environmental or health impacts. The cost for reporting in some categories is quite high when considering the amount of actual emissions generated. The risk that some sources would choose to replace the reduction of an ozone precursor or toxic contaminant with the reduction of a GHG to avoid reporting and future regulatory action on greenhouse gas emissions is a possibility that the EPA should evaluate.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the steps EPA has taken to develop a rule that provides critical data while minimizing economic impacts. With respect to the commenter's concern that sources would select reduction of GHG emissions rather than reduction of other pollutants, EPA expects that all sources will comply with all aspects of the CAA. It is the right of the source to choose if and how to go beyond the requirements of existing regulation to voluntarily reduce emissions; any and all voluntary pollution reductions are welcome.

Commenter Name: Thomas Diamond

Commenter Affiliation: Semiconductor Industry Association (SIA)

Document Control Number: EPA-HQ-OAR-2008-0508-0498.1

Comment Excerpt Number: 20

Comment: U.S. semiconductor manufacturing operations face tremendous competition from non-U.S.-based operations, including overseas foundry operations. No other "Country or Region" regulations require such detailed GHG emissions reporting as does the Proposed Rule: 1. No requirement to report usage and/or emissions by gas/process 2. No requirement for company-specific emissions characterization or such rigorous gas usage measurements 3. No abatement testing requirements 4. No expense to comply with U.S rule and no risk of revelation of confidential or competitive information Clearly, "leakage" could result as U.S. companies migrate their manufacturing operations to other countries/regions which is not the intent of the Proposed Rule.

Response: The electronics manufacturing industry is not included in the final rule as EPA further considers comments and options for this source category. See section III.I (Electronics Manufacturing) for a discussion of this source category.

Commenter Name: Karen St. John
Commenter Affiliation: BP America Inc. (BP)
Document Control Number: EPA-HQ-OAR-2008-0508-0631.1
Comment Excerpt Number: 17

Comment: EPA has significantly underestimated the costs associated with implementing the GHG reporting rule for the petroleum industry. Capital for equipment, development of procedures and programs, data collection infrastructure, and manpower requirements are all significantly greater than that characterized in the proposed rule, its Preamble, and the Regulatory Impact Analysis (RIA). The costs for the oil and gas industry are disproportionately high. A few examples are provided below to demonstrate the point, assuming that the costs presented by EPA in Table VIII-1 in the Preamble are correct: a) General Stationary Fuel Combustion accounts for 6% of downstream emissions, but its first year total annualized costs would amount to 17% of the total share. b) Oil and natural gas systems account for 3% downstream emissions but its first year total annualized costs are estimated to be 19% of the total share c) Petroleum refineries are estimated to account for 5% of the downstream emissions with an estimate that their total annualized cost is 2% of overall costs. This figure does not account for the cost of reporting for the stationary combustion units, or for the electricity generation from cogeneration systems, which many refiners have installed to increase their energy efficiency and reduce the intensity of GHG emissions. In addition, refineries would also have to bear the cost of reporting under other provisions, such as wastewater. The information made available to the public through the rule docket is inadequate for conducting an independent review of EPA's calculations and many of the assumptions that form the basis for the cost estimates given in the RIA. For example, EPA omitted from the RIA and its appendix the source equipment and component counts that define each of its Subpart W model facilities.

Response: EPA carefully considered comments such as this one and modified the rule to reduce its costs on industry. Please see Sections III.C, III.W, III.Y, and III.HH and III.II, for changes to the rule since proposal that may affect Oil and Gas industry. Note that several subparts, including oil and natural gas systems, wastewater treatment, and industrial landfills, are not included in the final rule as EPA further considers comments and options for this source category. See sections III.W, HH, and II of the Preamble (oil and natural gas systems, landfills, and wastewater treatment) for a discussion of these source categories. Also note that in analyzing the economic impacts of the rule on sectors of the economy, EPA summed the costs of all subparts expected to be associated with each sector to assess impacts. Please see Section 5 of the Regulatory Impact Analysis for additional information.

Commenter Name: Jennifer Reed-Harry
Commenter Affiliation: PennAg Industries Association
Document Control Number: EPA-HQ-OAR-2008-0508-0948.1
Comment Excerpt Number: 12

Comment: We seriously question how GHG reporting will not drive business out the USA. Mandatory reporting will increase the cost of doing business and there is a potential that industry will find it cheaper to operate overseas and import the final product back to the United States. Thereby GHG reporting will have accomplished nothing to curb the global impact and at the same time, will have negatively impacted the USA economy by creating greater job loss and increased the dire economic stability of many USA communities.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. Further, please see the response to comment EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above, for EPA's approach to reducing burdens on small businesses.

Commenter Name: Michael Carlson

Commenter Affiliation: MEC Environmental Consulting

Document Control Number: EPA-HQ-OAR-2008-0508-0615

Comment Excerpt Number: 8

Comment: Contrary to EPA, GHG emissions data are not routinely monitored and recorded by many industrial and commercial facilities for business purposes (16473). Thus, the proposed rule will indeed be burdensome especially in our significantly depressed economy.

Response: Please see response to comment EPA-HQ-OAR-2008-0508-0979.1, Comment Excerpt 2.

Commenter Name: James M. Bushee

Commenter Affiliation: PGC Electricity Committee

Document Control Number: EPA-HQ-OAR-2008-0508-0683.1

Comment Excerpt Number: 4

Comment: The GHG Reporting Proposal would create the largest, most far-reaching single reporting program in EPA's history. We applaud the Agency for recognizing some of the potential burdens and for allowing the broad use of carbon content mass balancing calculations and other accurate yet less costly alternatives to the installation of continuous emissions monitoring systems ("CEMS"). Nonetheless, the GHG Reporting Proposal promises significant direct and indirect burdens and concomitant increases to the cost of doing business. This is especially true for Electricity Committee members with respect to their obligations under the EGU emission reporting provisions of the proposed rule. Unlike the public utilities and independent power producers covered by this sector, Committee members' core business is not energy, and to the extent they engage in energy generation such activities are ancillary to their primary business of producing aluminum, fertilizer, wallboard and other consumer products. These companies are staffed leanly to minimize overhead, yet would almost certainly have to add and train personnel to collect and maintain emissions, fuel consumption and other data, much of which has not previously been tracked. EPA should recognize and take proactive steps to reduce the direct costs and other compliance burdens associated with the proposed reporting program. These costs include: 1. physical technology upgrades, such as CEMS and flow meter equipment enhancements (where applicable); 2. sampling and testing methodologies; 3. information technology upgrades, such as specialized software to record and track emissions and fuel consumption data and compile into EPA reporting formats; 4. labor costs, including training, report preparation and on-going compliance; and, 5. outside consultants and legal advisors.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. Please see the response to comment EPA-HQ-OAR-2008-0508-0593.1, Comment Excerpt 13, above, for a discussion of changes EPA made in the final rule to reduce

direct costs and compliance version. Also, please see comment response volume 17 document for responses to comments specific to electricity generation.

Commenter Name: Laurie A. Lehmberg

Commenter Affiliation: Texas Instruments Incorporated (TI)

Document Control Number: EPA-HQ-OAR-2008-0508-0682.1

Comment Excerpt Number: 2

Comment: The resulting proposal is a significant departure from the current level of reporting that TI has voluntarily submitted for over a decade. If TI is required to meet the proposed mandatory requirements, we would not be able to do so without incurring significant costs and disruption to our U.S. manufacturing facilities. TI operates 20% of the fabs surveyed by ISMI. TI has the most diverse product mix of any U.S. semiconductor company. Much of our U.S. semiconductor manufacturing is focused on analog products - thousands of products and tens of thousands of customers. If the rule were implemented as proposed the burdens created by the rule will be even greater for a company like TI with such a diverse product portfolio. U.S. manufacturing operations face tremendous competitive pressure from non-U.S. based operations and from overseas foundry operations. No other country's or region's regulations require such detailed GHG emissions as does this proposed rule. Placing these burdensome requirements on the remaining U.S. manufacturers increases the pressure on U.S. companies to migrate their manufacturing to other countries/regions. A 2009 white paper prepared for SIA by the law firm Dewey & LeSoeuf, "Maintaining America's Competitive Edge: Reversing the Erosion of Semiconductor Industry R&D and Manufacturing Activity in the United States", found that the share of semiconductor manufacturing capacity has grown in Asia and declined in Japan the U.S. and Europe. The study also found that 80% of leading edge capacity is located in Asia. Significantly increasing costs for U.S. manufacturers will only serve to accelerate this trend. A copy of the study is available through SIA. As the report explains, "Tolverall, the share of worldwide fabrication capacity in the United States has declined from about 42 percent in 1980, to 30 percent in 1990 to about 16 percent in 2007. [FOOTNOTE: The figures for 1980 and 1990 are based on capacity as measured in terms of estimated electrical functions that can be produced per month from Robert C. Leachman and Chien H. Leachman, "Globalization of Semiconductors," in Martin Kenney and Richard L. Florida (eds.), *Locating Global Advantage: Industry Dynamics in the International Economy* (Stanford University Press. 2004) at 210, table 8.2. The 2007 figure is from SEMI, Industry Research & Statistics Department and is based on wafer starts per month.] There are a number of reasons for the relative decline in fabrication capacity in the U.S. 1. First, the continued growth of semiconductor competitors in Asia has fueled capacity expansion there. Korea's Samsung is now the world's largest producer of memory chips and second only to Intel in worldwide sales. 2. Second, U.S. semiconductor producers have fabrication facilities outside of the United States, either wholly owned or joint ventures with foreign producers. [FOOTNOTE: For example, in recent years Intel has built a new fabrication facility in Israel and AMD has built new fabrication facilities in Germany.] These facilities have generally benefited from various tax and other incentives provided by the host government. 3. Third, as the cost of a new fabrication facility has increased dramatically over the past 15 years (currently in the range of \$3.0 billion or more each), many U.S. semiconductor firms have opted to rely on semiconductor foundries - independent contract manufacturing facilities - for some or all of their manufacturing capacity.[FOOTNOTE: Six hundred of the world's 1,300 fabless companies are located in North America according to the Global Semiconductor Alliance (GSA) and nine of the top ten fabless companies by revenue in 2007 were based in the United States. Data from GSA as at <http://www.gsaglobal.org/resources/industrvdataifacts.asp>] Technological

trends in the industry are greatly increasing wafer fabrication and chip-design costs so that some industry observers are predicting fewer companies will be able to maintain leading edge production and design capabilities as device geometries shrink. "In the new IC world order, fewer integrated device manufacturers (IDMs) can afford to build fabs, while only an elite group may be able to develop leading-edge IC designs over time." [FOOTNOTE:Mark LaPedus, "Costs Cast ICs into Darwinian Struggle," Electronic Engineering Times (March 30, 2007) at www.eetimes.com/showArticle.jhtml?articleID=198701495]. The result has been the rapid growth of what are termed "fabless" (companies with no manufacturing) or "fab-lite" (companies with capacity to produce only a portion of total sales) companies. Thus the manufacturing capacities for these fabless or fab-lite firms are the foundries, which are concentrated in Taiwan, Singapore and China. [FOOTNOTE: Foundries are estimated to account for 35 to 40 percent of installed fabrication capacity in Taiwan, Singapore and China. The foundry industry started in Taiwan with TSMC which is still the largest foundry company in the world. Other major foundry producers are UMC (Taiwan), Chartered Semiconductors (Singapore) and SMIC (China). Recently, integrated device manufacturers such as IBM and Samsung have begun offering foundry services.] Finally, an important reason for the declining U.S. share of world fabrication capacity is the lower cost of building and operating a fabrication facility outside of the United States - primarily due to government provided tax breaks, grants and other incentives... Recent industry studies have estimated the relative cost advantage offshore to be about \$1 to \$1.7 billion over ten years. [FOOTNOTE: Paul S. Otellini, "Impact of Taxes on U.S. Semiconductor Company Decisions," Intel Corporation (March 31, 2005) and Abbie Gregg, Inc., "The Paradigm for Financing Fabs," Albany Symposium 2005 on Global Nanotechnology (September 26-28, 2005)]. Imposing burdensome GHG reporting requirements on U.S.-based fabs will simply increase the offshore cost advantage. Semiconductor fabrication capacity trends by region from 2000 to 2007 and projections through 2009 from SEMI are provided in the charts below. [SEE EPA-HQ-OAR-2008-0508-0682.1 PAGES 4 AND 5 FOR CHARTS]. The share of world fabrication capacity installed in Japan, the United States and Europe have all declined in recent years while the share of capacity in Korea, Taiwan and China has increased. (Dewey & LeBoeuf, "Maintaining America's Competitive Edge: Reversing the Errosion of Semiconductor Industry R&D and Manufacturing Activity in the United States", March 2009 pp. 13-17.)

Response: The semiconductor industry is not included in the final rule as EPA further considers comments and options for this source category. Thus, we are not responding to comments on this subpart at this time.

Commenter Name: Brandy Carter

Commenter Affiliation: Kansas Cattlemen's Association (KCA)

Document Control Number: EPA-HQ-OAR-2008-0508-1570

Comment Excerpt Number: 2

Comment: If GHG from livestock sources are regulated under the Clean Air Act, small producers with as few as 50 beef cattle would be subject to permits and costly processes, therefore regulating these small producers out of business. With 89.4% of the beef inventory deriving from small ranches, this would be devastating to the U.S. cattle industry. For every dollar earned in agriculture, \$7 is generated in economic stimulus. The economic ramifications of this-to rural America much less the national food security issues must be weighed before any regulations are implemented. Therefore, we strongly encourage you to look at all potential unintended consequence of any actions you take. For instance, foreign countries do not have the same safety standards for food production as the U.S, nor do foreign countries adhere to the same

environmental regulations. As environmental stewards, livestock producers understand the importance of maintaining a sustainable environment. However, by invalidly regulating emissions from livestock production, you will undoubtedly cause economic hardship to the true stewards of the land and all consumers of the United States of America.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. This rule covers reporting, not regulation of GHG emissions. For further information, please see Response to Comments Document Volume 9, Legal Issues, for a discussion of how this rule does not make GHGs regulated pollutants for other CAA programs. Also, please see section III.JJ of the preamble to the rule for additional information on changes to the Manure Management provisions of the rule to reduce cost on livestock producers. Complete documentation of the analysis can be found in the Final Regulatory Impact Analysis, Section 5.2.

Commenter Name: Joseph J. Croce

Commenter Affiliation: Virginia Manufacturers Association (VMA)

Document Control Number: EPA-HQ-OAR-2008-0508-0526.1

Comment Excerpt Number: 12

Comment: The VMA believes that GHG regulation should support economic growth and do no harm to the economy. For this reason, the VMA concurs with the National Association of Manufacturers recommendation that each participating entity should receive \$10,000 – \$50,000 for purchasing the necessary software and technical support to develop the inventory.

Response: EPA, in developing its final Mandatory GHG Reporting Rule, considered many comments such as this one and reexamined the rule's provisions, costs, and estimated impacts. At this time, EPA is not finalizing several subparts to permit further data collection and analysis. EPA revised the rule to reduce costs where possible, such as reducing the length of time that records must be retained from 5 years to 3 years. EPA's final rule is cost-effective and minimizes unnecessary costs and burdens to the economy. However, EPA was unable to develop a meaningful rule that would impose no costs on the economy. Further, EPA does not have the resources or the mandate to subsidize compliance activities at all affected facilities. Complete detail of the economic impacts of the proposed rule can be found in the text of the regulatory impact analysis (RIA), sections 4 and 5.

Commenter Name: See Table 3

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0480.1

Comment Excerpt Number: 1

Comment: Any federal climate policy is inextricably linked to national energy policy and energy security. Therefore, policies must be optimized to ensure real energy demand and energy security concerns are addressed, while mitigating potential risks from climate change. Hence, GHG regulation must be crafted with an eye toward the effect on the nation's energy and economic security. Indeed, the Department of Energy expressed particular concern that regulation of GHGs under the CAA could have significant adverse effects on U.S. energy supplies, reliability, and security. [Footnote: See AN PR, 73 Fed. Reg. 44368 (While the Department has general concerns about the portrayal of likely effects of proposals to regulate

GHGs under the CAA on all sectors of the U.S. economy, DOE is particularly concerned about the effects of such regulation on the energy sector. The effects of broad based, economy-wide regulation of GHGs under the CAA would have significant adverse effects on U.S. energy supplies, energy reliability, and energy security.) (Department of Energy preliminary comments)].

Response: EPA worked closely with DOE in developing the rule. Please note that this rule requires reporting of GHG emissions from affected sources, but does not regulate the emissions themselves. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule.

Commenter Name: See Table 4

Commenter Affiliation:

Document Control Number: EPA-HQ-OAR-2008-0508-0635

Comment Excerpt Number: 21

Comment: If EPA remains concerned about cost issues, it should employ an appropriate cost-effectiveness metric which favors direct measurement. The EU's emission monitoring system provides one such option. It employs a cost/benefit framework to select monitoring methods. Importantly, the EU does not define the 'benefits' term in this cost/benefit analysis purely in relation to the source, but instead looks to the system as a whole. The 'overall benefits' are 'defined as the value of the allowances corresponding to an improvement of the level of accuracy' an improved methodology would provide. [footnote: 144 See id. at § 2.4(a)] As the British Environment Agency, which administers the EU system in the United Kingdom, explains, reporters determine this value by calculating the difference in uncertainty between two monitoring methods and then multiplying that difference by their estimated emissions. The resulting term represents the GHG emissions associated with the increase in accuracy; these emissions can then be monetized by looking to their value on the carbon market. [footnote: 45 See British Environment Agency, EU Emissions Trading Scheme: Guidance to Operators on the Requirements for Installations to Achieve the Highest Applicable Monitoring Tiers (May 2008), available: http://www.environment-agency.gov.uk/static/documents/business/guidance_1373049 (Ex.19).] Thus, if a source emitting 25,000 tons of CO₂ were to improve its accuracy from $\pm 4\%$ to $\pm 1\%$, the accuracy improvement would be $\pm 3\%$. Multiplying that improvement by the source's total emissions gives an additional 750 tons of CO₂ which could be resolved with the more accurate technology. The market value of these emissions over the lifetime of the new technology could then be used to decide whether the cost of the technology was worthwhile. This approach could work, if desired, for both CEMS new facility requirements and for new facilities outside CEMS categories, which would then be required to use the best monitoring tier EPA found to be cost-effective.

Response: EPA is concerned about cost issues and made every effort to minimize costs and identify a cost-effective set of requirements. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. EPA carefully examined the costs and benefits of the rule, as described in Sections 5 and 6 of the Regulatory Impact Analysis. Section 5 also examines the cost effectiveness of regulatory alternatives. EPA followed standard analysis practices and used EPA's *Guidelines for Preparing Economic Analyses* in assessing the benefits, costs, and cost-effectiveness of the rule.

Commenter Name: Larry R. Soward

Commenter Affiliation: Texas Commission on Environmental Quality (TCEQ)

Document Control Number: EPA-HQ-OAR-2008-0508-0619

Comment Excerpt Number: 6

Comment: While acknowledging that anthropogenic GHG emissions are driven by manufacturing and consuming raw products, some claim that Texas should be given special dispensation from the rule's coverage in order to account for their contribution of goods and commodities to the nation's economy. They claim that emission data obtained may be skewed to suppliers of commodities consumed in other sectors of the country, and that in using any collected data to develop future regulatory requirements, states should not be disproportionately penalized for GHG emissions that are a direct result of producing goods and commodities necessary to sustain a thriving national economy. Yet, Texas' numerous and significant contributions to the national economy do not have to come at the expense of our environment and our public welfare, or to the detriment of the global climate. Texas continues to enjoy one of the strongest and most extensive economic development eras in history. All of this prosperity has occurred while Texas is dealing with major and far-reaching environmental issues and challenges and while significant efforts have been made by every sector to improve our environment. Texas has shown that where it applies its commitment and resources, it can continue to improve our environment and our quality of life while ensuring a sound and growing economy. It can certainly do the same with GHG issues. The rule presents balance, and contains sufficient flexibility for affected facilities and many outright exclusions for GHG emitters.

Response: In developing the rule, EPA carefully examined the costs and benefits of the mandatory GHG reporting program, and identified the most cost-effective set of requirements. : Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. Complete detail of the economic impacts of the rule can be found in the text of the regulatory impact analysis (RIA). EPA concurs that the final rule will produce the high-quality data needed while providing flexibility and minimizing costs to the extent possible.

Commenter Name: Roni Neff

Commenter Affiliation: Johns Hopkins University Bloomberg School of Public Health

Document Control Number: EPA-HQ-OAR-2008-0508-0595

Comment Excerpt Number: 3

Comment: While assistance should be available to aid facilities in reporting, the obligation should be on industry to provide this information as part of the cost of doing business.

Response: EPA is developing this rule under the authority of CAA Section 114 and 208, and concurs that complying with the rule is the responsibility of the affected sources. Please see the Comment Response Document, Volumes 7 and 12 for additional information on the rule's development and the Preamble to the Rule for a discussion of the rule development process.

Commenter Name: Paul Glader
Commenter Affiliation: Hecla Mining Company
Document Control Number: EPA-HQ-OAR-2008-0508-0579.1
Comment Excerpt Number: 2

Comment: Hecla is a member of the non-fuel minerals and metals mining industry, which will be directly and negatively affected by the proposed reporting rule. In addition, coal mining, which produces a low cost energy source for the American economy will sustain significant negative economic impacts. The proposed reporting requirements will add another layer to an already costly and burdensome regulatory structure. Mining is a fundamental and critical industry to America, which is becoming increasingly more dependent on foreign countries for minerals.

Response: The underground mining industry is not included in the final rule as EPA further considers comments and options for this source category. See section III.KK (suppliers of coal) for a discussion of this source category.

Commenter Name: Alison A. Keane
Commenter Affiliation: National Paint & Coatings Association, Inc. (NPCA/FSCT)
Document Control Number: EPA-HQ-OAR-2008-0508-0593.1
Comment Excerpt Number: 2

Comment: EPA estimated the first year costs at the 1,000 tCO₂e threshold to be \$434 million, as opposed to \$109 million at the 100,000 tCO₂e threshold – a difference of \$325 million, which is significant. In addition, EPA's estimates are probably too low since most facilities under the 100,000 tCO₂e do not routinely monitor and collect data on GHG emissions, contrary to EPA's assertions. Thus, NPCA believes that the additional \$325 million burden on 35,000 facilities to collect an additional 3.6% of the national emissions is unwarranted and that the 25,000 tCO₂e threshold EPA sets in the Proposed Rule is too low.

Response: After careful consideration of comments and reexamination of costs and effectiveness, EPA determined that 25,000 MtCO₂e is the threshold for reporting. Please see the Preamble to the Rule and Comment Response Document Volume 2 for further discussion of threshold determination.

Commenter Name: Andrew Kaldenberg
Commenter Affiliation: Iowa Poultry Association
Document Control Number: EPA-HQ-OAR-2008-0508-0523.1
Comment Excerpt Number: 1

Comment: In looking at the scope of enterprises affected and the future additional regulatory initiatives, we believe it certain the increased cost of goods will be passed onto consumers. The net effect of this tax will be added costs for both producers and consumers of goods and services including food. This could be particularly onerous in our current economy. We would suggest market-based incentives to offset increasing the costs of goods would be a better alternative.

Response: EPA acknowledges that reporting GHG emissions will result in costs for affected businesses, and that some share of those costs may ultimately be passed on to their customers.

EPA carefully analyzed the costs of complying with the rule. Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. The discussion of the costs and economic impacts of complying with the rule are found in the regulatory impact analysis, Chapters 4 and 5. Poultry producers whose GHG emissions exceed the threshold are estimated to incur slightly less than \$1000 per year per facility. See the Preamble to the final rule, section III.JJ and Response to Comments Document Volume 46 for more information on manure management. EPA has determined that the data that will be provided to EPA as a result of the rule will provide critical information for the development of future climate change policy. (See the Preamble to the final rule, Section I).

Commenter Name: Tom Shipley

Commenter Affiliation: Iowa Cattlemen's Association

Document Control Number: EPA-HQ-OAR-2008-0508-0542

Comment Excerpt Number: 1

Comment: I am writing to comment on the proposed rule regarding the Greenhouse Tax and the impact on animal agriculture and the food system in this country. To say this would force the food animal production system to severely contract would be an understatement. This would drive production of this source of food out of this country causing a huge economic impact to the areas involved to say nothing of increasing the cost of food to consumers. The food that would be available would not be subject to inspections as domestic food production would be creating a major food safety concern. Putting the nations food supply in foreign hands would prove to be the same disaster as what has happened with our energy needs. To do this for no positive results for the environment would be a huge waste of resources and a glaring example of government regulations out of control for no legitimate benefit to society.

Response: : Please see response to comment DCN EPA-HQ-OAR-2008-0508-0523.1, excerpt 1, above. See Preamble to the final rule, section III.JJ and Comment Response Document Volume 46 for more information on manure management.

Commenter Name: Russ Murray

Commenter Affiliation: Ohio Cast Metals Association (OCMA)

Document Control Number: EPA-HQ-OAR-2008-0508-0471

Comment Excerpt Number: 1

Comment: As the largest metal casting state in the Nation, Ohio's metal casters are a key component of the U.S. manufacturing base. More than 250 metal casting companies in Ohio employ approximately 22,000 people in jobs that require important skills and pay commensurately for those skills. Metal casting employees have "good jobs at good wages". The Ohio metal casting industry is facing tremendous challenges. The worst economic recession since the Great Depression has our foundries operating at 60-80% of capacity and bleeding cash. As highly capitalized companies, Ohio metalcasters must work at higher levels of capacity to make a profit. This month, Alliance Casting Company LLC closed its plant employing more than 1000 people. The longer the recession continues the more such shutdowns will occur. Burdensome regulations and increasing energy prices in an energy intensive industry have already conspired to increase costs and lower productivity. Simultaneously, competition from foreign castings, especially those made in China, India, and Brazil, has been crushing. The Ohio

metal casting industry cannot survive additional environmental regulation that fails to recognize the vulnerability of our industry.

Response: : Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule. Please see the response to commenter DCN EPA-HQ-OAR-2008-0508-0609.1, Comment Excerpt 2, above, for information on EPA's efforts to minimize impacts on small entities.

Commenter Name: Todd Staples

Commenter Affiliation: Texas Department of Agriculture

Document Control Number: EPA-HQ-OAR-2008-0508-0671.1

Comment Excerpt Number: 1

Comment: The proposed mandatory reporting rules will increase input costs in the production process and place additional burdens on agricultural producers and the manufacturers of agricultural goods. In regard to reporting for manure management, which would affect certain cattle, dairy, poultry and pork facilities, the livestock industry is vital to the economy, and additional reporting requirements would increase financial costs and administrative procedures for producers. The total economic impact of livestock in the state of Texas is \$21.8 billion annually. Your agency anticipates that the proposed reporting rules for this category would impact approximately 50 facilities nationwide, and as a national leader in cattle, dairy, poultry and pork production, Texas farmers and ranchers will undoubtedly be negatively affected.

Response: : Please see response to comment DCN EPA-HQ-OAR-2008-0508-0523.1, excerpt 1, above. See Preamble to the final rule, section III.JJ and Comment Response Document Volume 46 for more information on manure management. Note that revisions to provisions since the proposed rule result in reduced costs for this source category by more than \$1000 for the average covered entity.

Commenter Name: Michael Carlson

Commenter Affiliation: MEC Environmental Consulting

Document Control Number: EPA-HQ-OAR-2008-0508-0615

Comment Excerpt Number: 2

Comment: By EPA's own estimates, this regulation will cost private enterprise \$100 million dollars per year, and taxpayers \$14 million per year as the cost for EPA to administer the program, based on 2006 dollars (16604). While these sums are paltry- veritable chump change- compared to recent deficits incurred and proposed by the current administration, we aver that the amounts are substantial to businesses and the citizenry of the United States which labor under an economic depression, exacerbated by the federal government's deficit spending.

Response: Please see the response to comment DCN EPA-HQ-OAR-2008-0508-0341, Comment Excerpt 2, above, for a discussion of the EPA's efforts to minimize the economic impacts of the rule.

Table 1

COMMENTS	AFFILIATE	DCN
Lorraine Krupa Gershman	American Chemistry Council, et al.	EPA-HQ-OAR-2008-0508-0477.1
Audrae Erickson	Corn Refiners Association	EPA-HQ-OAR-2008-0508-0519.1
Lawrence W. Kavanagh	American Iron and Steel Institute (AISI)	EPA-HQ-OAR-2008-0508-0695.1

Table 2

COMMENTS	AFFILIATE	DCN
Mark Dopp	American Meat Institute (AMI)	EPA-HQ-OAR-2008-0508-0440.1
Stewart T. Leeth	Smithfield Foods, Inc.	EPA-HQ-OAR-2008-0508-0553

Table 3

COMMENTS	AFFILIATE	DCN
Lisa Beal	Interstate Natural Gas Association of America (INGAA)	EPA-HQ-OAR-2008-0508-0480.1
Richard Bye	CenterPoint Energy, Inc.	EPA-HQ-OAR-2008-0508-2124.1
Brianne Metzger	Spectra Energy Corporation	EPA-HQ-OAR-2008-0508-0364.1

Table 4

COMMENTS	AFFILIATE	DCN
Craig Holt Segall	Sierra Club	EPA-HQ-OAR-2008-0508-0635.1
Melissa Thrailkill	Center for Biological Diversity	EPA-HQ-OAR-2008-0508-0430.1